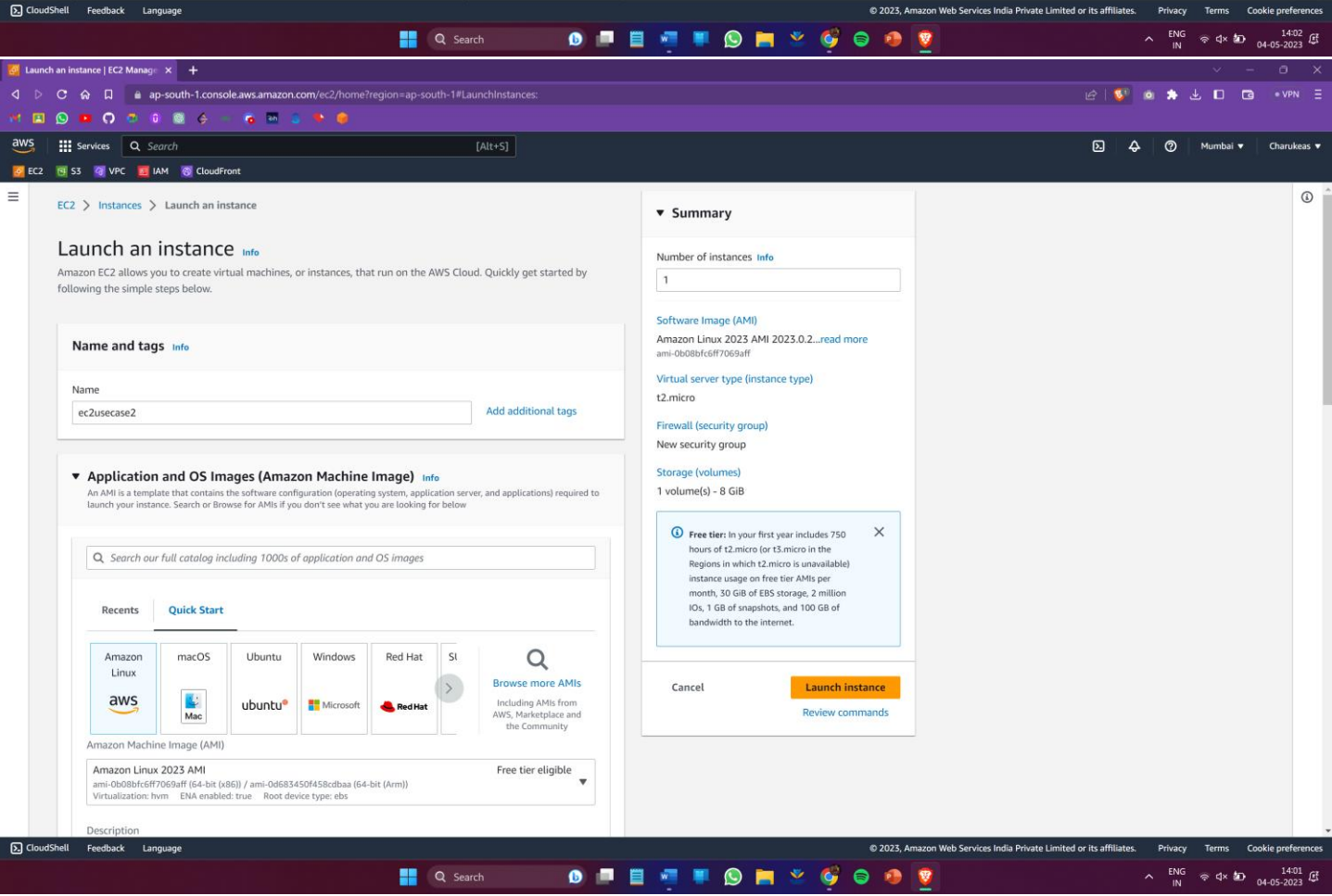
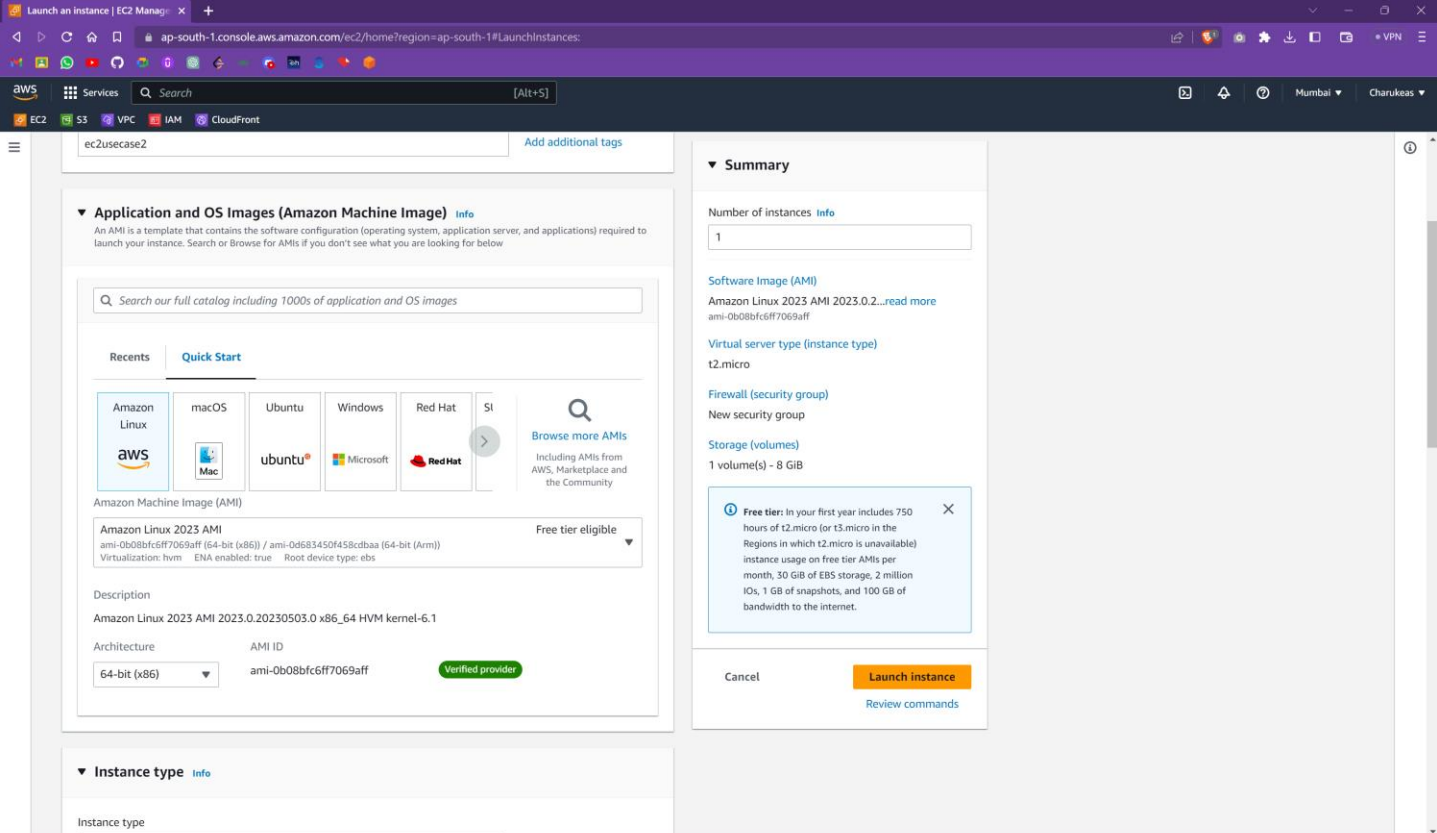


# 727721EUIT023 – CHARUKEAS T

## Cloud Computing using AWS

## Coding Assessment – 1

Qn1:



Launch an instance | EC2 Management Console

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:

Services Search [Alt+S]

EC2 S3 VPC IAM CloudFront

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-18' 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

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

Configure storage Info

Advanced

1x 10 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

0 x File systems

Edit

Advanced details Info

Summary

Number of instances Info

1

Software Image (AMI)

Amazon Linux 2023 AMI 2023.0.2...read more

ami-0b08bfc6ff7069aff

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 10 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, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

Launch instance

Review commands

CloudShell Feedback Language

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Search

Launch an instance | EC2 Management Console

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:

Services Search [Alt+S]

EC2 S3 VPC IAM CloudFront

Instance type Info

Instance type

t2.micro

Family: t2 1 vCPU 1 GiB Memory Current generation: true

On-Demand Linux pricing: 0.0124 USD per Hour

On-Demand Windows pricing: 0.017 USD per Hour

On-Demand RHEL pricing: 0.0724 USD per Hour

On-Demand SUSE pricing: 0.0124 USD per Hour

Free tier eligible

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

ec2usecase2

Create new key pair

Network settings Info

Edit

Network Info

vpc-041b350b36414c1c7

Subnet Info

No preference (Default subnet in any availability zone)

Auto-assign public IP Info

Enable

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

Summary

Number of instances Info

1

Software Image (AMI)

Amazon Linux 2023 AMI 2023.0.2...read more

ami-0b08bfc6ff7069aff

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 usage on free tier AMIs 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

Review commands

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Search

ec2usecase2.pem

1,674 B • Done

Launch an instance | EC2 Management Console

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:

Services Search [Alt+S]

EC2 S3 VPC IAM CloudFront

Launch an Instance | EC2 Manager

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:

Services Search [Alt+S]

EC2 S3 VPC IAM CloudFront

ec2usecase2 Create new key pair

▼ Network settings Info Edit

Network Info  
vpc-041b350b36414c1c7  
Subnet Info  
No preference (Default subnet in any availability zone)  
Auto-assign public IP Info  
Enable  
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-18' 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

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

▼ Summary

Number of instances Info  
1  
Software Image (AMI)  
Amazon Linux 2023 AMI 2023.0.2...read more  
ami-0b08bfc6f7069aff  
Virtual server type (instance type)  
t2.micro  
Firewall (security group)  
New security group  
Storage (volumes)  
1 volume(s) - 10 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, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel Launch instance Review commands

▼ Configure storage Info Advanced

1x 10 GiB gp3 Root volume (Not encrypted)

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ENG IN 14:04 04-05-2023

Launch an Instance | EC2 Manager

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:

Services Search [Alt+S]

EC2 S3 VPC IAM CloudFront

EC2 > Instances > Launch an instance

Success  
Successfully initiated launch of instance (i-0a319082691df57b1)  
Launch log

Next Steps

What would you like to do next with this instance, for example "create alarm" or "create backup"

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

Create Load Balancer  
Create a application, network gateway or classic Elastic Load Balancer  
Create Load Balancer

Create AWS budget  
AWS Budgets allows you to create budgets, forecast spend, and take action on your costs and usage from a single location.  
Create AWS budget

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

Manage detailed monitoring  
Enable or disable detailed monitoring for the instance. If you enable detailed monitoring, the Amazon EC2 console displays monitoring graphs with a 1-minute period.  
Manage detailed monitoring

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

Manage CloudWatch alarms  
Create or update Amazon CloudWatch alarms for the instance.  
Manage CloudWatch alarms

Instance details | EC2 Management

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#InstanceDetails:instanceId=i-0a319082691df57b1

ServicesSearch[Alt+S]

EC2S3VPCIAMCloudFront

EC2

Experience

EC2 Dashboard

EC2 Global View

Events

Limits

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

Placement Groups

Key Pairs

Network Interfaces

Load Balancing

Load Balancers

Target Groups

Auto Scaling

Launch Configurations

Auto Scaling Groups

EC2 > Instances > i-0a319082691df57b1

Instance summary for i-0a319082691df57b1 (ec2usecase2) info

Updated less than a minute ago

Instance ID

i-0a319082691df57b1 (ec2usecase2)

IPv6 address

-

Hostname type

IP name: ip-172-31-10-183.ap-south-1.compute.internal

Answer private resource DNS name

IPv4 (A)

Auto-assigned IP address

3.109.55.5 [Public IP]

IAM Role

-

IMDSv2

Required

Public IPv4 address

3.109.55.5 | open address

Instance state

Running

Private IP DNS name (IPv4 only)

ip-172-31-10-183.ap-south-1.compute.internal

Instance type

t2.micro

VPC ID

vpc-041b350b36414c1c7

Subnet ID

subnet-0ee630fa311bfbcb2

Private IPv4 addresses

172.31.10.183

Public IPv4 DNS

ec2-3-109-55-5.ap-south-1.compute.amazonaws.com | open address

Elastic IP addresses

-

AWS Compute Optimizer finding

Opt-in to AWS Compute Optimizer for recommendations. | Learn more

Auto Scaling Group name

-

Details

Security

Networking

Storage

Status checks

Monitoring

Tags

Security details

IAM Role

-

Owner ID

845281745553

Launch time

Thu May 04 2023 14:05:18 GMT+0530 (India Standard Time)

Security groups

sg-0c1a91e2df6aa274a (launch-wizard-18)

Inbound rules

Filter rules

Name	Security group rule ID	Port range	Protocol	Source	Security groups	Description
-	sg-01f3b2ed8d5b4d276	22	TCP	0.0.0.0/0	launch-wizard-18	-

Outbound rules

Filter rules

Name	Security group rule ID	Port range	Protocol	Destination	Security groups	Description
-	sg-0a93ed91545eSad97	All	All	0.0.0.0/0	launch-wizard-18	-

CloudShell

Feedback

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ENG

IN

14:12

04-05-2023

Qn2:

EC2 Management Console

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:

Services Search [Alt+S]

EC2 S3 VPC IAM CloudFront

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

ec2usecase1

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

Recents Quick Start

Amazon Linux

aws

macOS

Mac

Ubuntu

ubuntu

Windows

Microsoft

Red Hat

Red Hat

SI

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Microsoft Windows Server 2022 Base

ami-06c2ec1ceac22e8d6 (64-bit (x86))

Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Description

Microsoft Windows Server 2022 Full Locale English AMI provided by Amazon

Architecture

AMI ID

64-bit (x86)

ami-06c2ec1ceac22e8d6

Verified provider

▼ Summary

Number of instances [Info](#)

1

Software Image (AMI)

Microsoft Windows Server 2022 ...[read more](#)

ami-06c2ec1ceac22e8d6

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 30 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, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

Launch instance

[Review commands](#)

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ENG IN 14:07 04-05-2023

EC2 Management Console

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:

Services Search [Alt+S]

EC2 S3 VPC IAM CloudFront

ec2usecase1

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.

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Recents Quick Start

Amazon Linux

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macOS

Mac

Ubuntu

ubuntu

Windows

Microsoft

Red Hat

Red Hat

SI

Browse more AMIs

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Microsoft Windows Server 2022 Base

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Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Description

Microsoft Windows Server 2022 Full Locale English AMI provided by Amazon

Architecture

AMI ID

64-bit (x86)

ami-06c2ec1ceac22e8d6

Verified provider

▼ Instance type [Info](#)

Instance type

▼ Summary

Number of instances [Info](#)

1

Software Image (AMI)

Microsoft Windows Server 2022 ...[read more](#)

ami-06c2ec1ceac22e8d6

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 30 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, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

Launch instance

[Review commands](#)

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EC2 Management Console

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:

Services Search [Alt+S]

EC2 S3 VPC IAM CloudFront

Microsoft Windows Server 2022 Base  
ami-06c2ec1ceac22e8d6 (64-bit (x86))  
Virtualization: hvm    ENA enabled: true    Root device type: ebs

Free tier eligible

Description  
Microsoft Windows Server 2022 Full Locale English AMI provided by Amazon

Architecture  
AMI ID  
64-bit (x86)    ami-06c2ec1ceac22e8d6    Verified provider

▼ Instance type [Info](#)

Instance type  
t2.micro  
Family: t2    1 vCPU    1 GiB Memory    Current generation: true  
On-Demand Linux pricing: 0.0124 USD per Hour  
On-Demand Windows pricing: 0.017 USD per Hour  
On-Demand RHEL pricing: 0.0724 USD per Hour  
On-Demand SUSE pricing: 0.0124 USD per Hour  
Free tier eligible  
☒ 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  
ec2usecase1  
[Create new key pair](#)  
For Windows instances, you use a key pair to decrypt the administrator password. You then use the decrypted password to connect to your instance.

▼ Network settings [Info](#)

[Edit](#)

Network [Info](#)

▼ Summary

Number of instances [Info](#)  
1

Software Image (AMI)  
Microsoft Windows Server 2022 ...[read more](#)  
ami-06c2ec1ceac22e8d6

Virtual server type (instance type)  
t2.micro

Firewall (security group)  
New security group

Storage (volumes)  
1 volume(s) - 30 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, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

Launch instance

[Review commands](#)

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ENG IN 14:10 04-05-2023

EC2 Management Console

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:

Services Search [Alt+S]

EC2 S3 VPC IAM CloudFront

▼ 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  
ec2usecase1  
[Create new key pair](#)  
For Windows instances, you use a key pair to decrypt the administrator password. You then use the decrypted password to connect to your instance.

▼ Network settings [Info](#)

[Edit](#)

Network [Info](#)  
vpc-041b350b36414c1c7  
Subnet [Info](#)  
No preference (Default subnet in any availability zone)  
Auto-assign public IP [Info](#)  
Enable  
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-19' with the following rules:  
☒ Allow RDP 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 [Info](#)  
1

Software Image (AMI)  
Microsoft Windows Server 2022 ...[read more](#)  
ami-06c2ec1ceac22e8d6

Virtual server type (instance type)  
t2.micro

Firewall (security group)  
New security group

Storage (volumes)  
1 volume(s) - 30 GiB

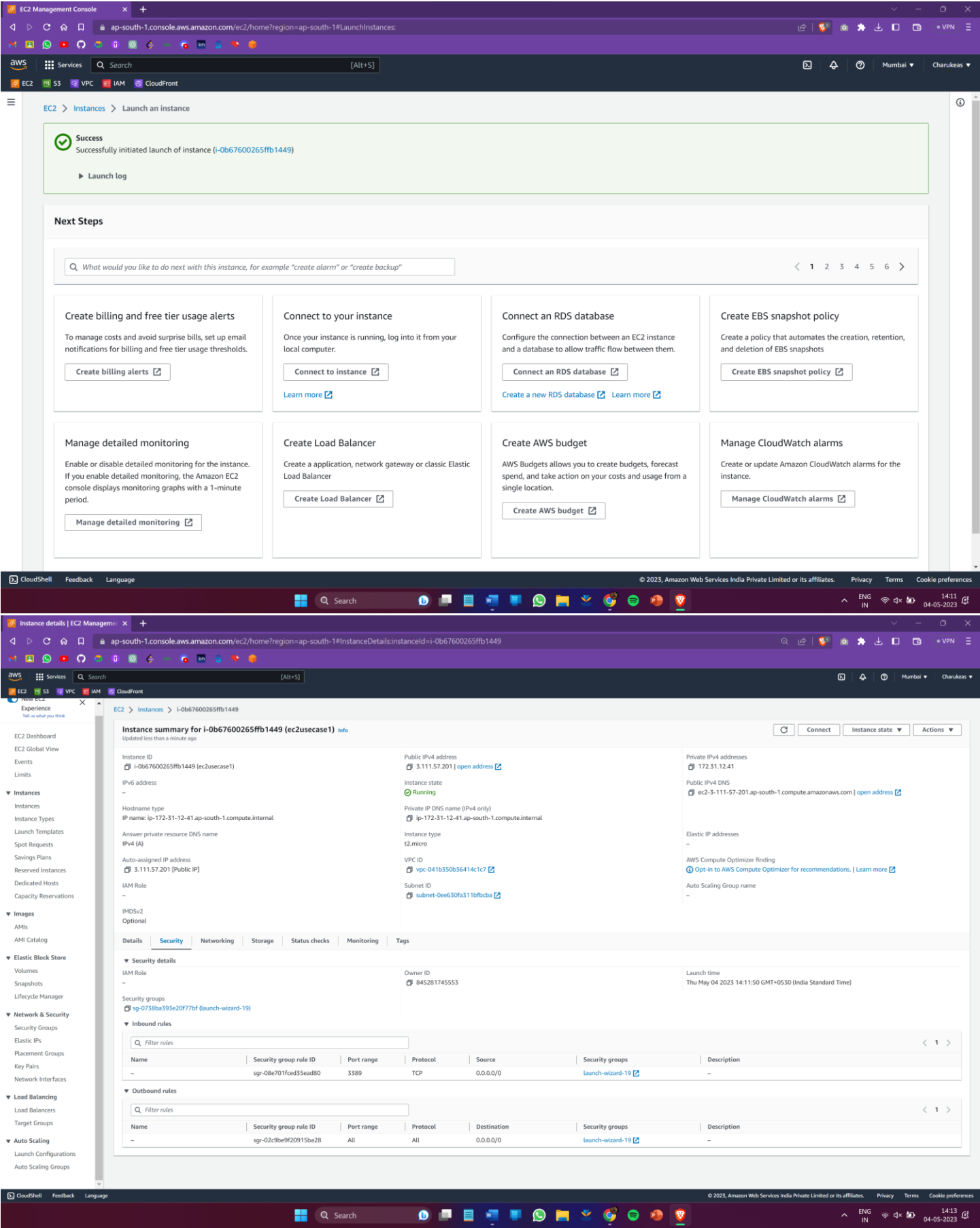
Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

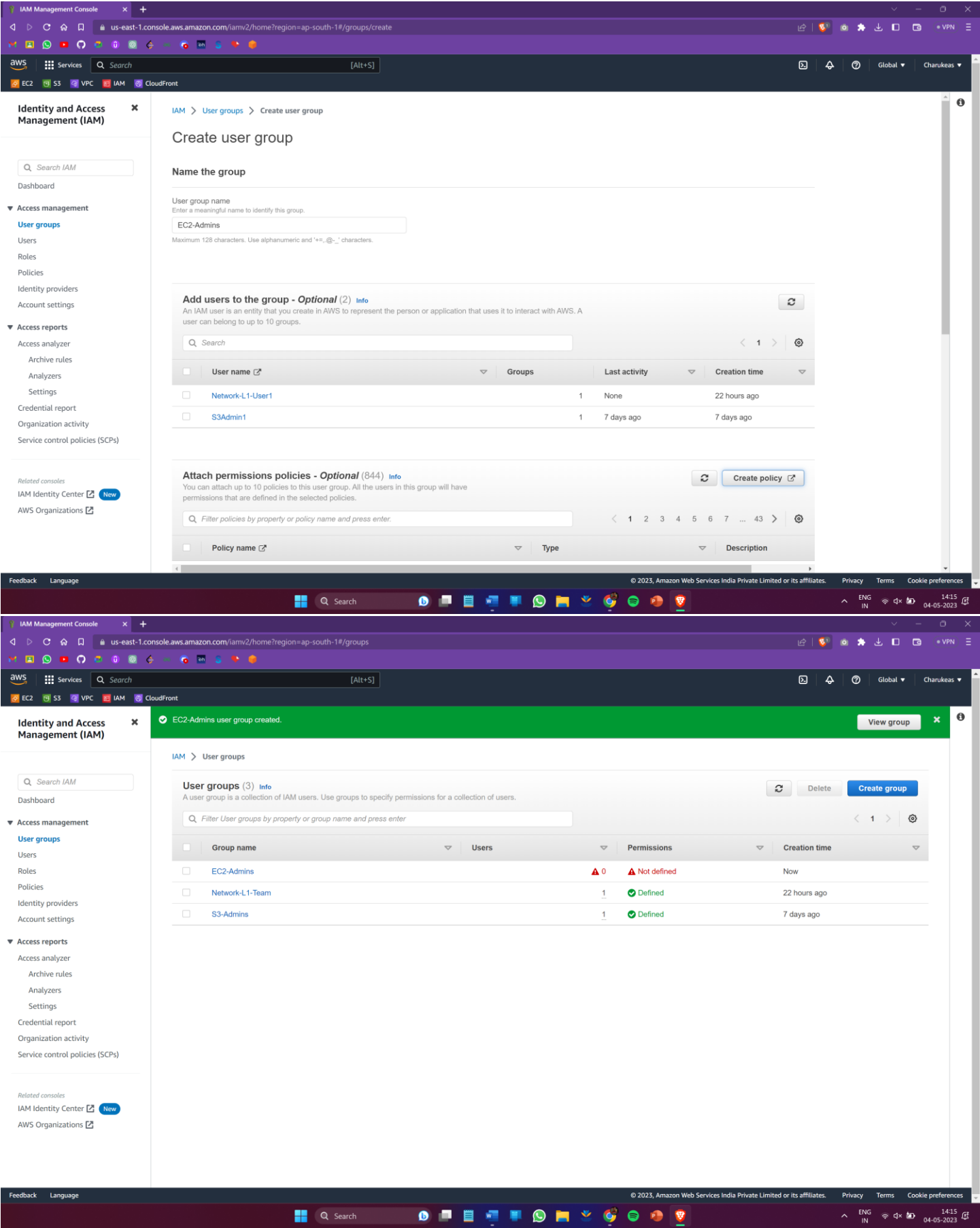
Launch instance

[Review commands](#)

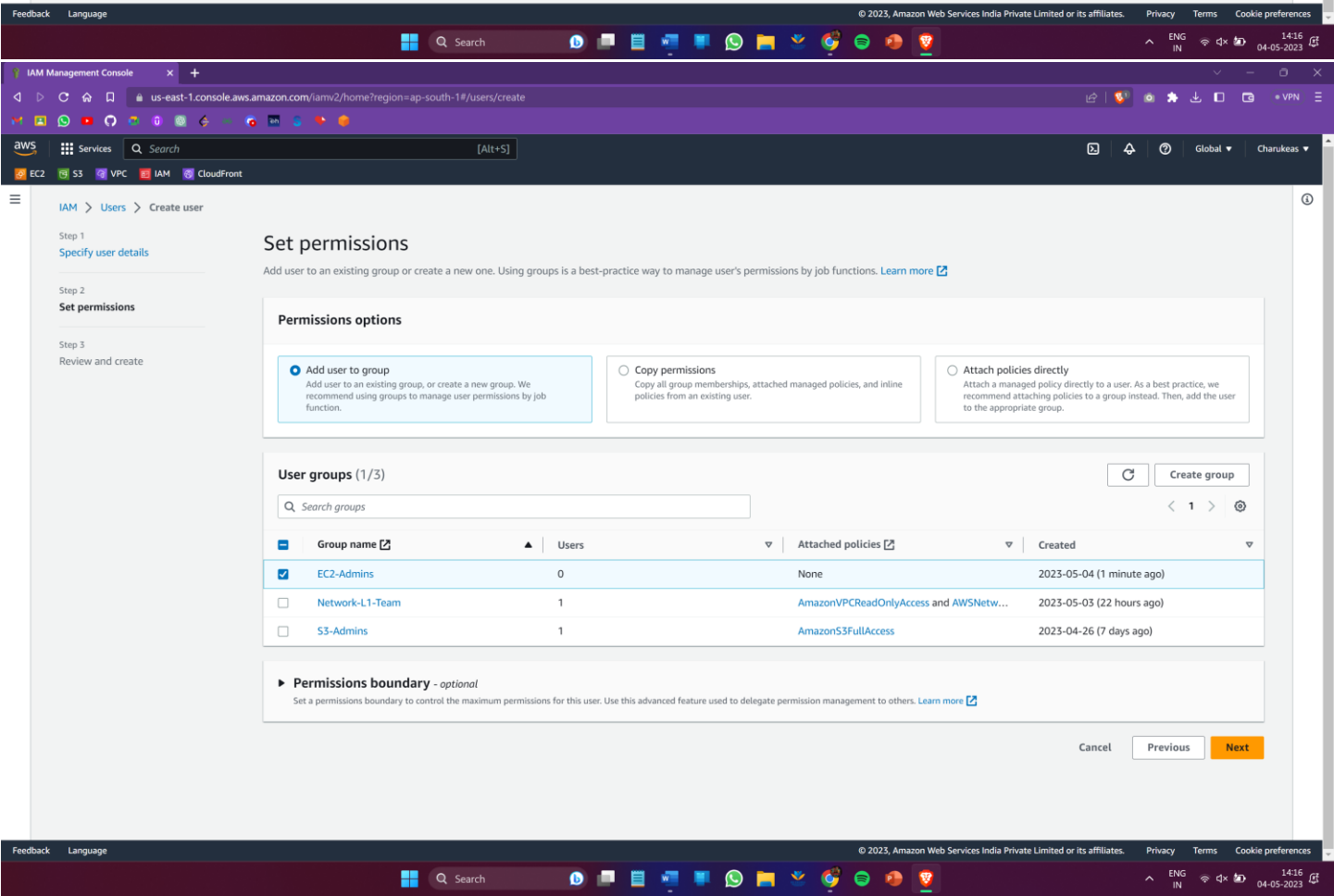
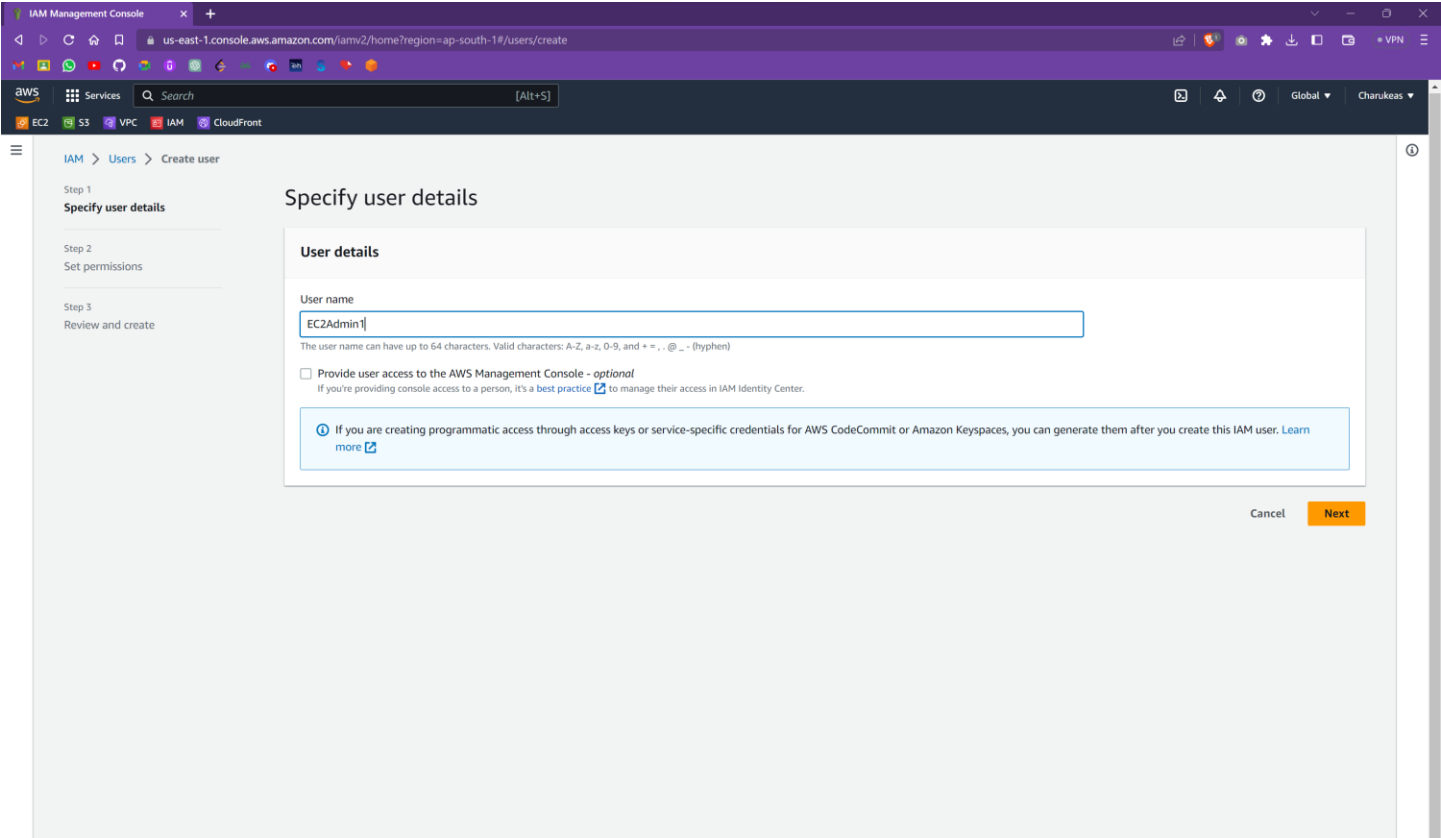
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting



Qn3:







Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

User groups

Users

Roles

Policies

Identity providers

Account settings

Access reports

Access analyzer

Archive rules

Analzers

Settings

Credential report

Organization activity

Service control policies (SCPs)

Related consoles

IAM Identity Center

AWS Organizations

User created successfully

You can view and download the user's password and email instructions for signing in to the AWS Management Console.

View user

IAM > Users

Users (3) Info

An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

Find users by username or access key

EC2Admin1

EC2-Admins

Never

None

None

-

Network-L1-User1

Network-L1-Team

Never

None

None

-

S3Admin1

S3-Admins

7 days ago

None

7 days ago

-

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Identity and Access Management (IAM)

Search IAM

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Organization activity

Service control policies (SCPs)

Related consoles

IAM Identity Center

AWS Organizations

IAM > User groups > EC2-Admins

EC2-Admins

Delete

Edit

Summary

User group name

EC2-Admins

Creation time

May 04, 2023, 14:15 (UTC+05:30)

ARN

arn:aws:iam::845281745553:group/EC2-Admins

Users

Permissions

Access Advisor

Users in this group (1)

An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS.

Search

EC2Admin1

1

None

Now

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14:17

04-05-2023

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us-east-1.console.aws.amazon.com/iamv2/home?region=ap-south-1#/groups/details/EC2-Admins?section=permissions

aws

Services

Search

[Alt+S]

EC2

S3

VPC

IAM

CloudFront

Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

- User groups
- Users
- Roles
- Policies
- Identity providers
- Account settings

Access reports

- Access analyzer
- Archive rules
- Analizers
- Settings
- Credential report
- Organization activity
- Service control policies (SCPs)

Related consoles

- IAM Identity Center
- AWS Organizations

✓ Policies attached to this user group.

IAM

User groups

EC2-Admins

EC2-Admins

Delete

Summary

Edit

User group name

EC2-Admins

Creation time

May 04, 2023, 14:15 (UTC+05:30)

ARN

arn:aws:iam::845281745553:group/EC2-Admins

Users

Permissions

Access Advisor

Permissions policies (2)

Info

You can attach up to 10 managed policies.

Filter policies by property or policy name and press enter.

1

☐

Policy name

Type

Description

☐

AmazonEC2FullAccess

AWS managed

Provides full access to Amazon EC2 via the AW...

☐

AutoScalingFullAccess

AWS managed

Provides full access to Auto Scaling.

Feedback

Language

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