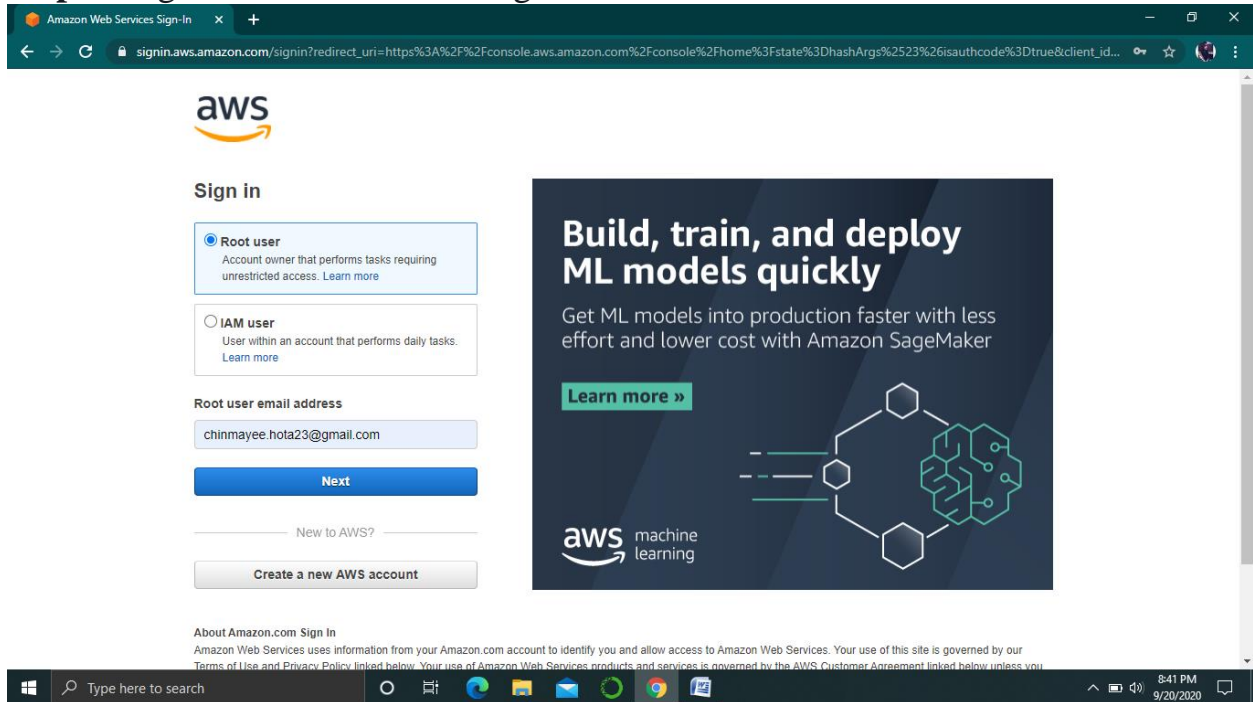
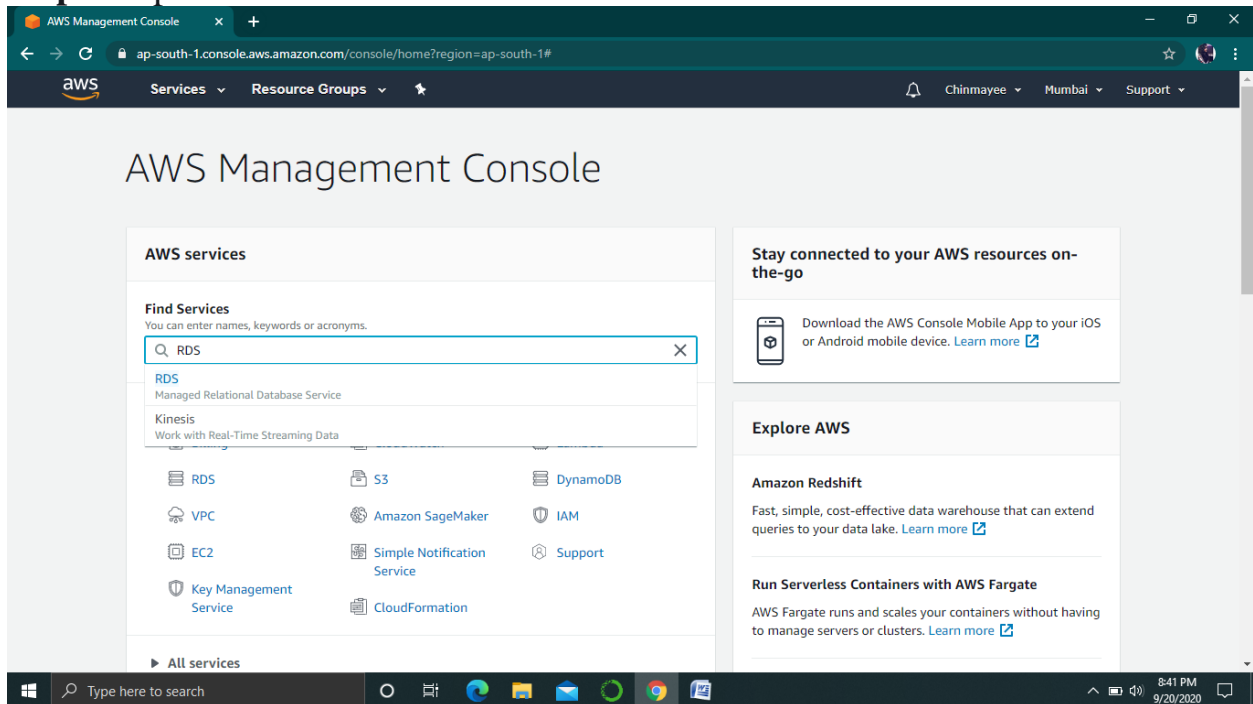


CREATING A DATABASE USING AMAZON AURORA

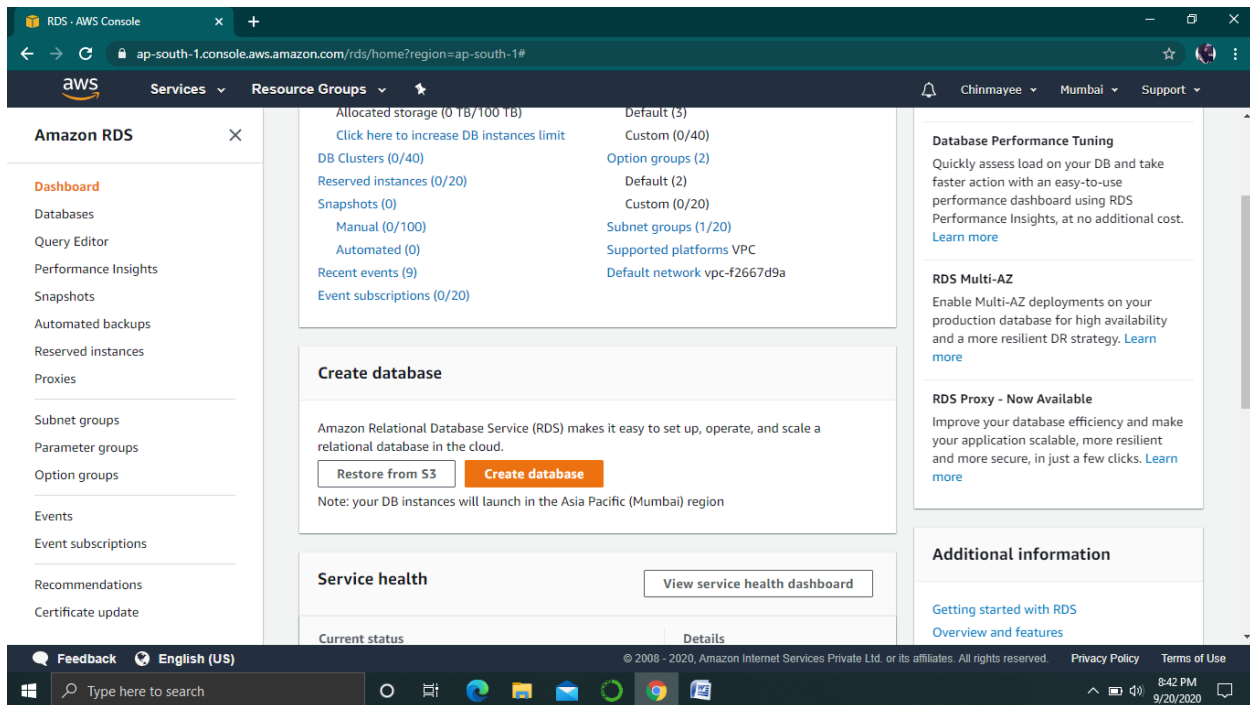
Step 1: Sign in to the AWS Management Console.



Step 2: Open the service as RDS.

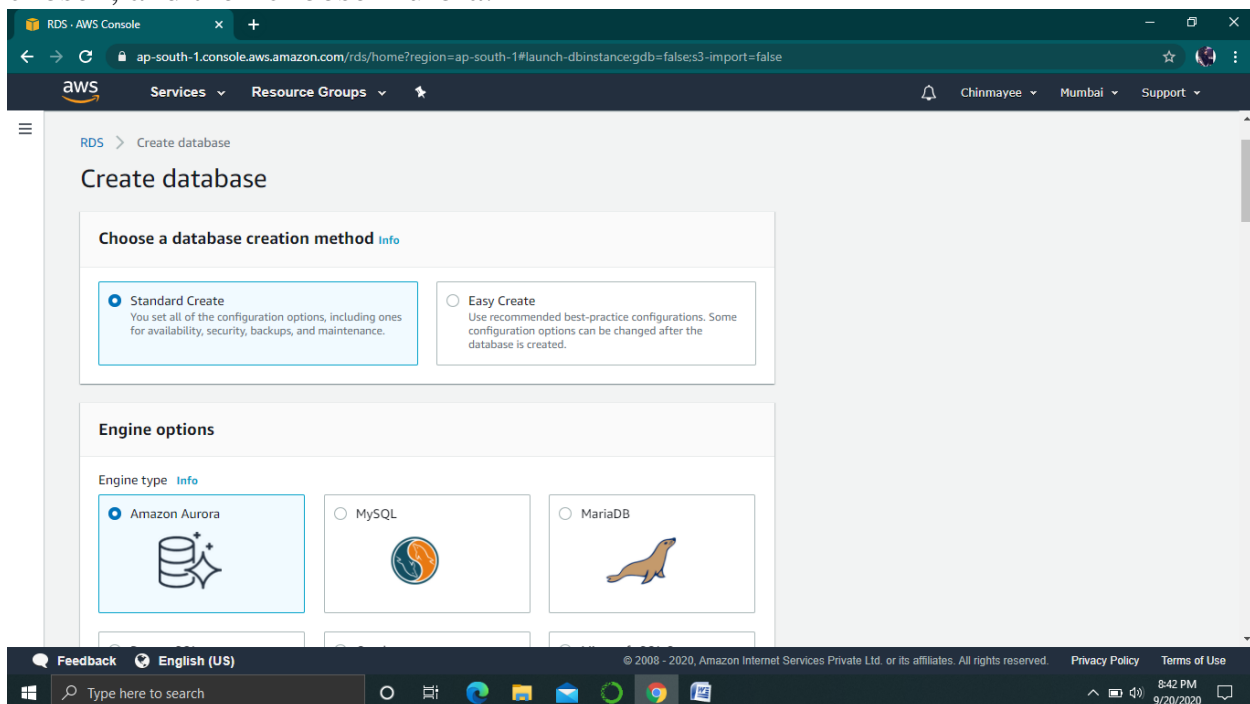


Step 3: In the navigation pane, choose Databases.

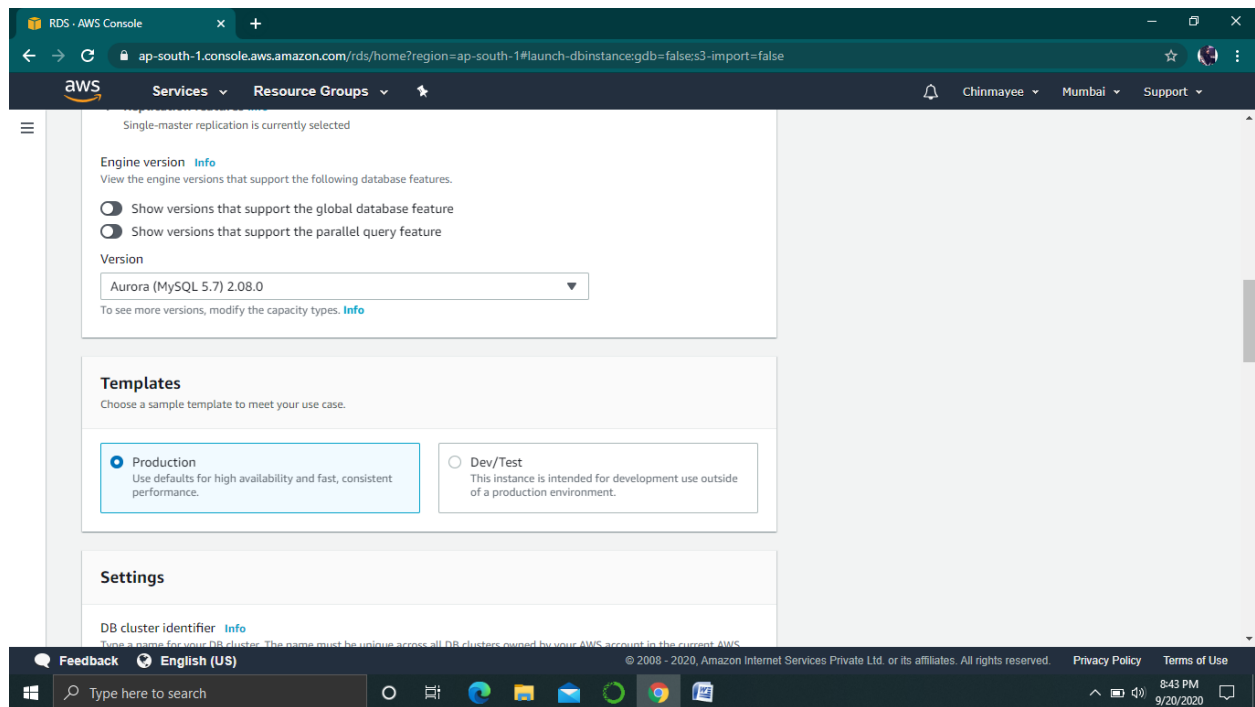


Step 4: Choose Create database.

Step 5: On the Create database page, make sure that the Standard Create option is chosen, and then choose Aurora.



Step 6: In the Templates section, choose Production tier.



Step 7: In the Settings section, set these values:

- DB instance identifier – database-1
- Master username – admin
- Auto generate a password – Disable the option
- Master password – Choose a password.
- Confirm password – Retype the password.

Settings

DB cluster identifier [Info](#)
Type a name for your DB cluster. The name must be unique across all DB clusters owned by your AWS account in the current AWS Region.
database-1
The DB cluster identifier is case-insensitive, but is stored as all lowercase (as in "mydbcluster"). Constraints: 1 to 60 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

▼ Credentials Settings

Master username [Info](#)
Type a login ID for the master user of your DB instance.
admin
1 to 16 alphanumeric characters. First character must be a letter

☐ Auto generate a password
Amazon RDS can generate a password for you, or you can specify your own password

Master password [Info](#)

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), ' (single quote), " (double quote) and @ (at sign).

Confirm password [Info](#)

Step 8: In the DB instance size section, set these values:

- Burstable classes (includes t classes)
- db.t2.medium

DB instance size

DB instance class [Info](#)
Choose a DB instance class that meets your processing power and memory requirements. The DB instance class options below are limited to those supported by the engine you selected above.

☐ Memory Optimized classes (includes r and x classes)

☒ Burstable classes (includes t classes)

db.t2.medium
2 vCPUs 4 GiB RAM Not EBS Optimized

☐ Include previous generation classes

Availability & durability

Multi-AZ deployment [Info](#)

☐ Create an Aurora Replica or Reader node in a different AZ (recommended for scaled availability)
Creates an Aurora Replica for fast failover and high availability.

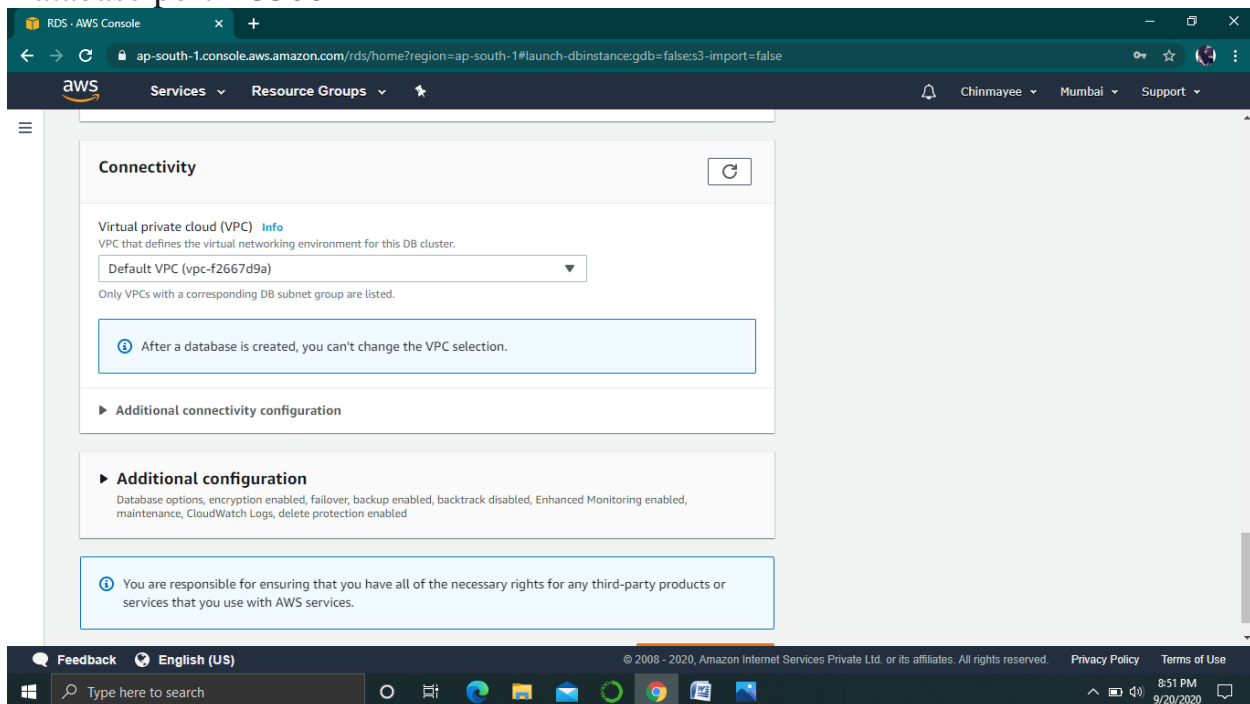
☒ Don't create an Aurora Replica

Connectivity

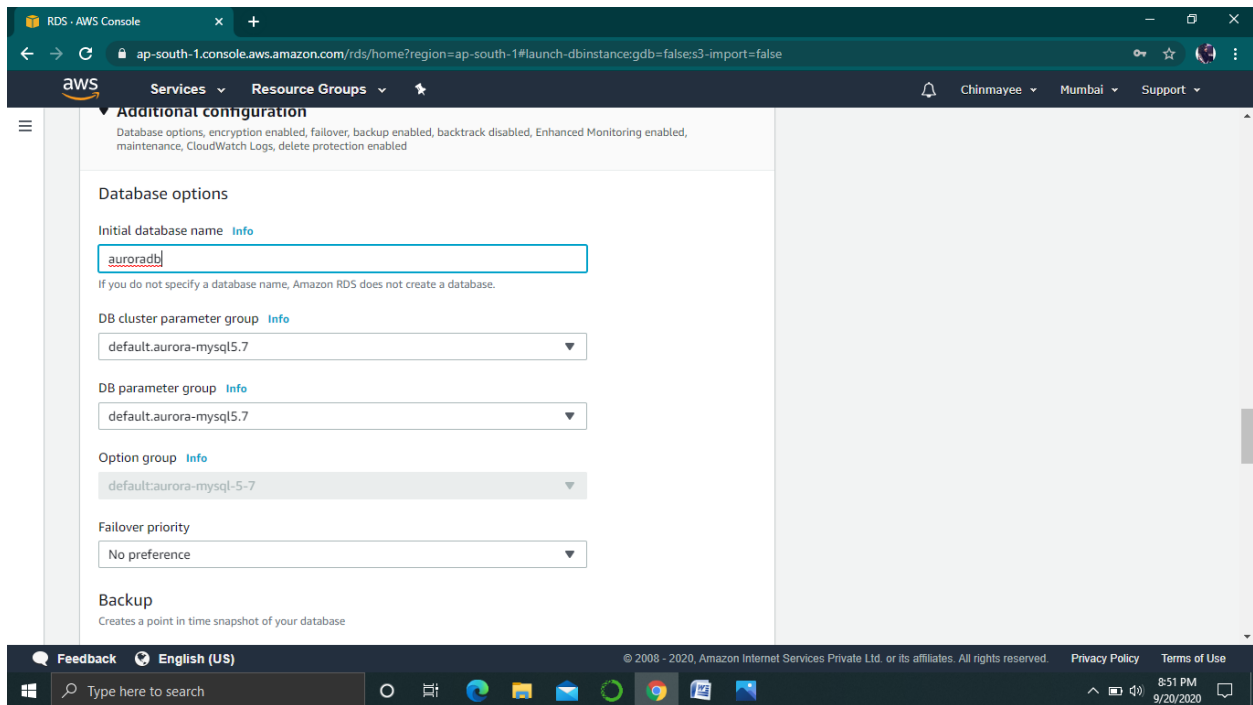
Step 9: In the Storage and Availability & durability sections, use the default values.

Step 10: In the Connectivity section, open Additional connectivity configuration and set these values:

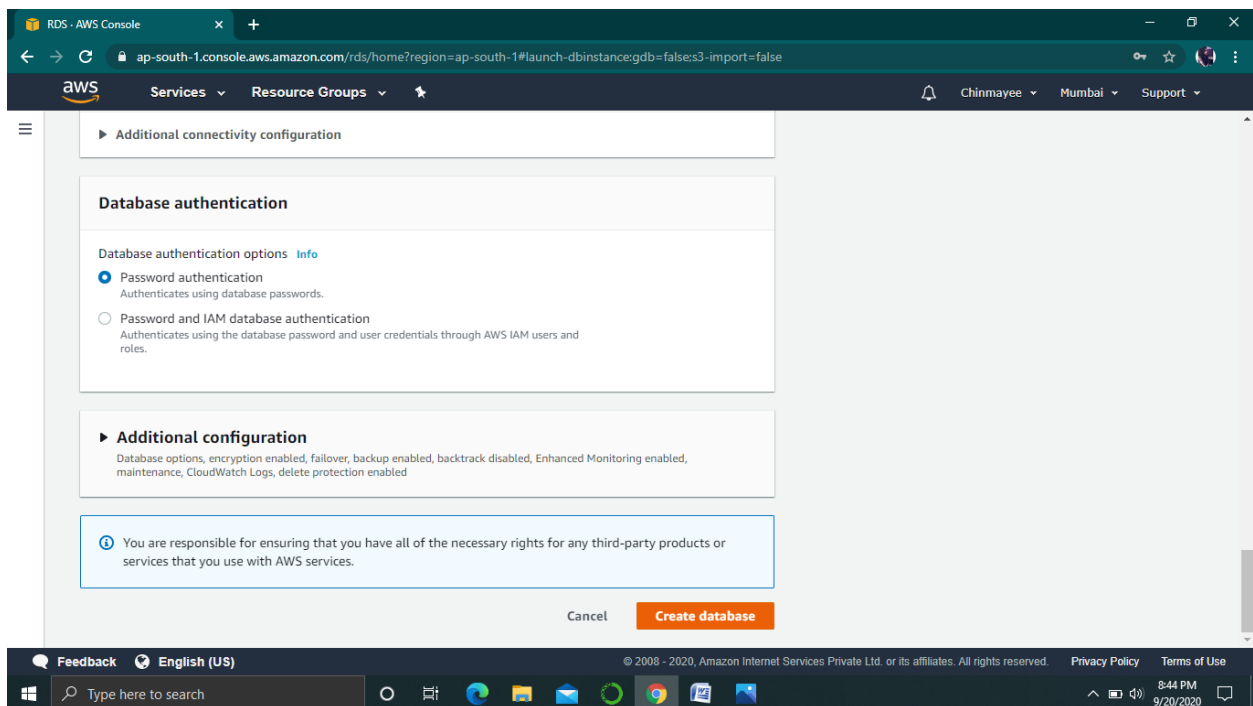
- Virtual Private Cloud (VPC) – Choose an existing VPC with both public and private subnets.
- Subnet group – The DB subnet group for the VPC, created .
- Publicly accessible – No
- VPC security groups – Choose an existing VPC security group.
- Remove other security groups, such as the default security group, by choosing the X associated with each.
- Availability zone – No Preference
- Database port – 3306



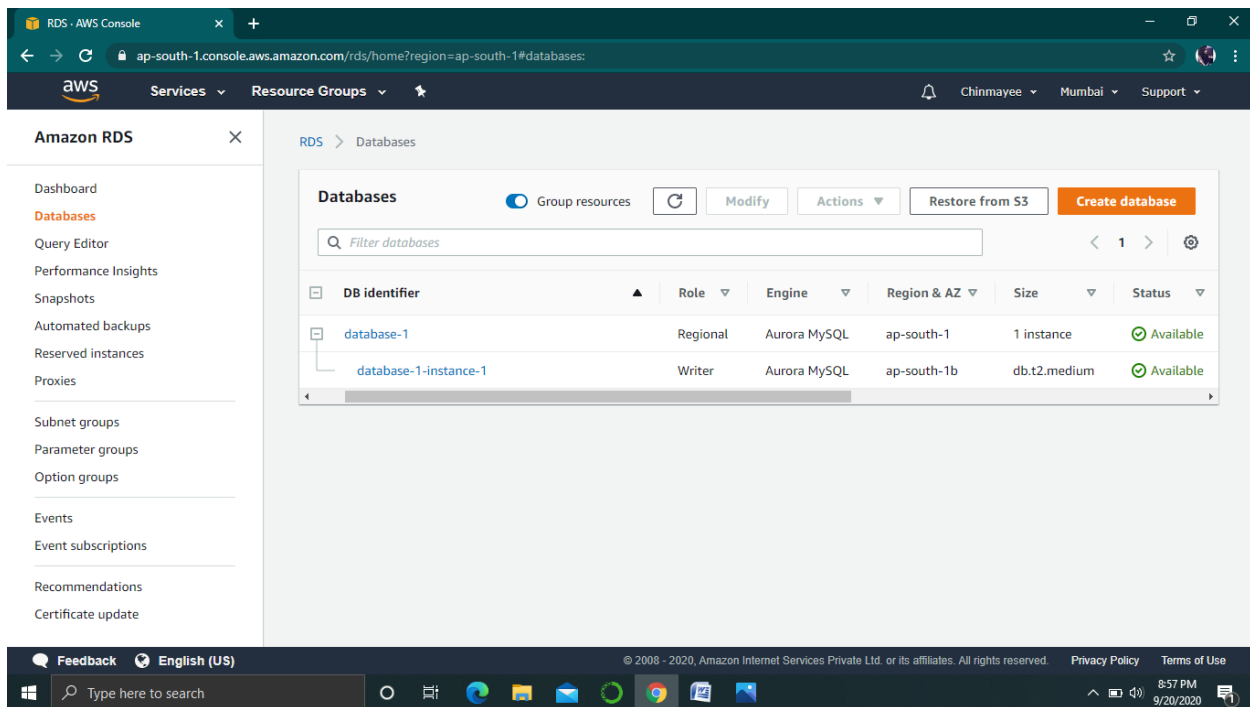
Step 11: Open the Additional configuration section, and enter auroradb for Initial database name. Keep the default settings for the other options.



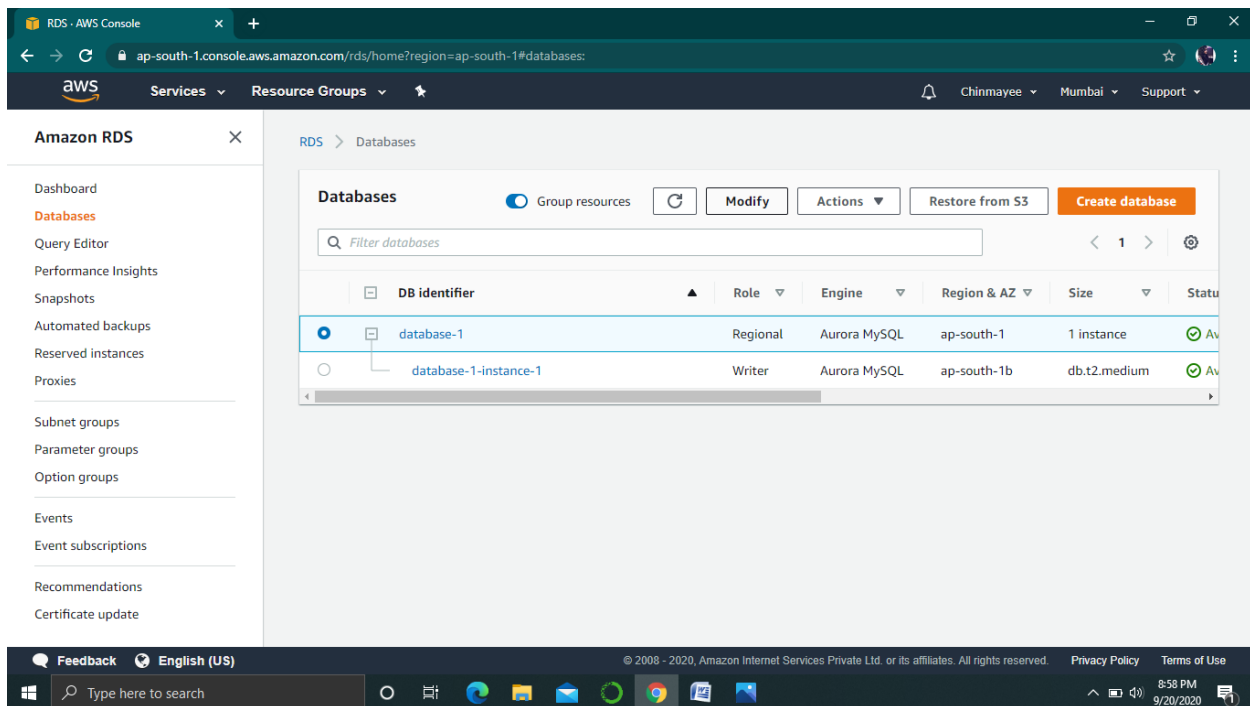
Step 12: Choose Create database to create your RDS AURORA DB instance.



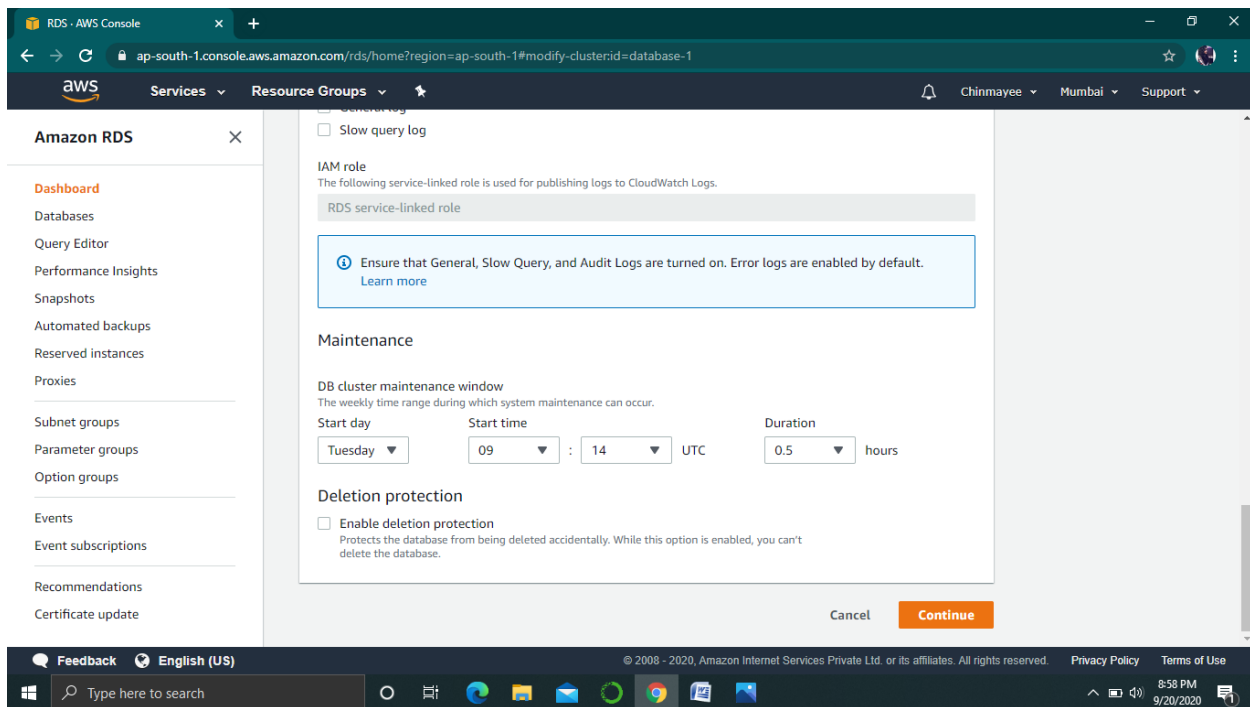
Step 13: Wait for the Status of your new DB instance to show as Available. Then choose the DB instance name to show its details.



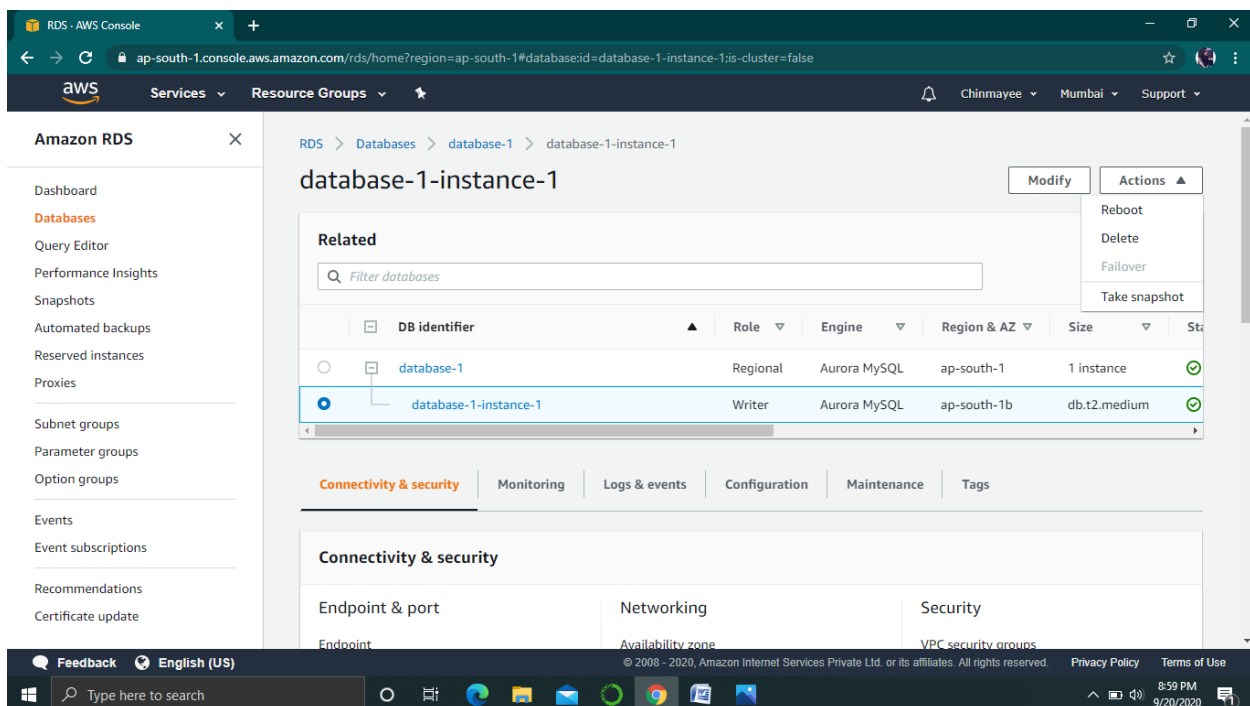
Step 14: Select the database from the dashboard and select modify.



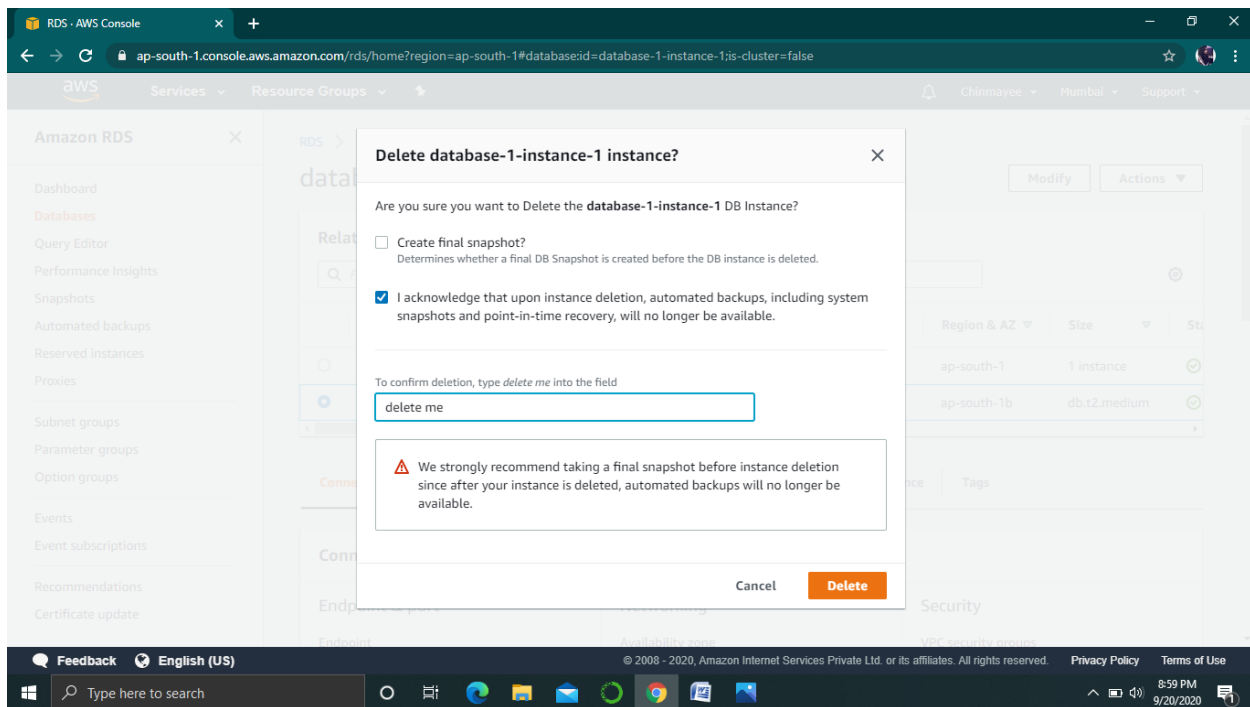
Step 15: Disable the delete protection as we had enabled it previously and click on continue.



Step 16: Now again select the database instance from the dashboard and select actions and then click on delete.



Step 17: Confirm the dialog box for deletion.



CONFIGURE ELASTIC BLOCK STORE VOLUME

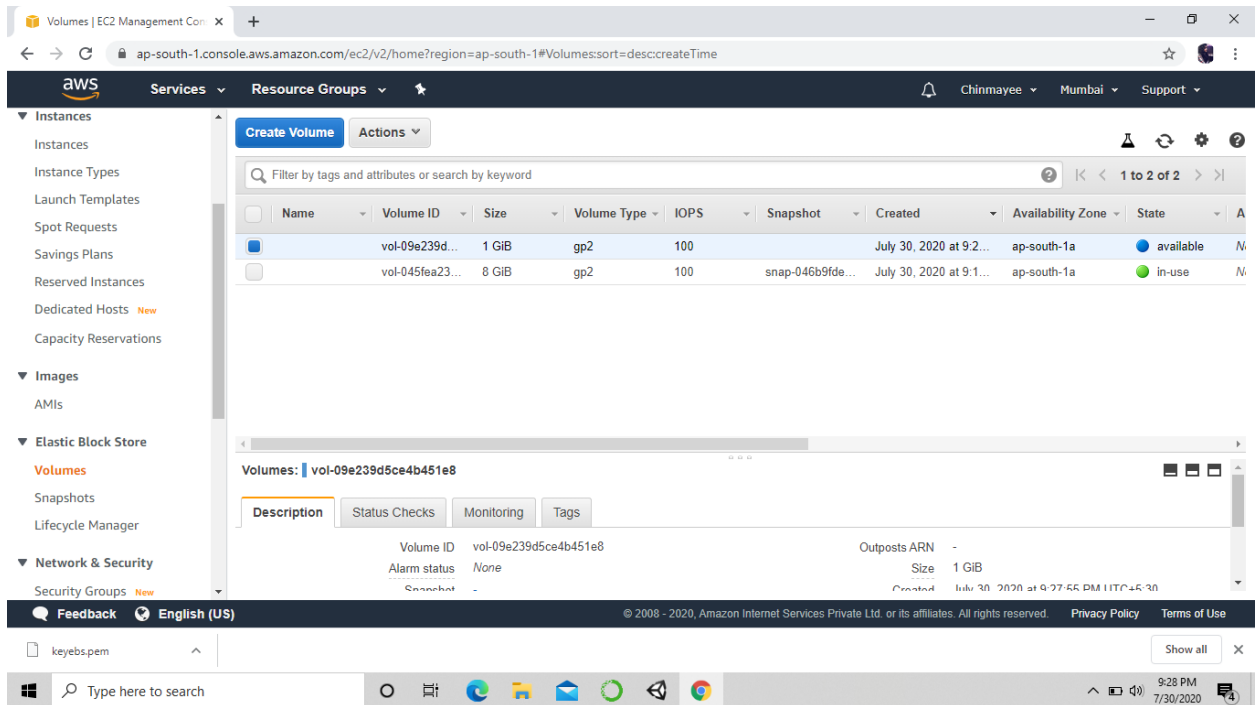
Step 1 – Create Amazon EBS volume using the following steps.

- Open the Amazon EC2 console.
- Select the region in the navigation bar where the volume is to be created.
- In the navigation pane, select Volumes, then select Create Volume.
- Provide the required information like Volume Type list, Size, IOPS, Availability zone, etc. then click the Create button.
- The volume names can be seen in the volumes list.

The screenshot displays the 'Create Volume' page in the AWS Management Console. The page is titled 'Create Volume' and shows the following configuration options:

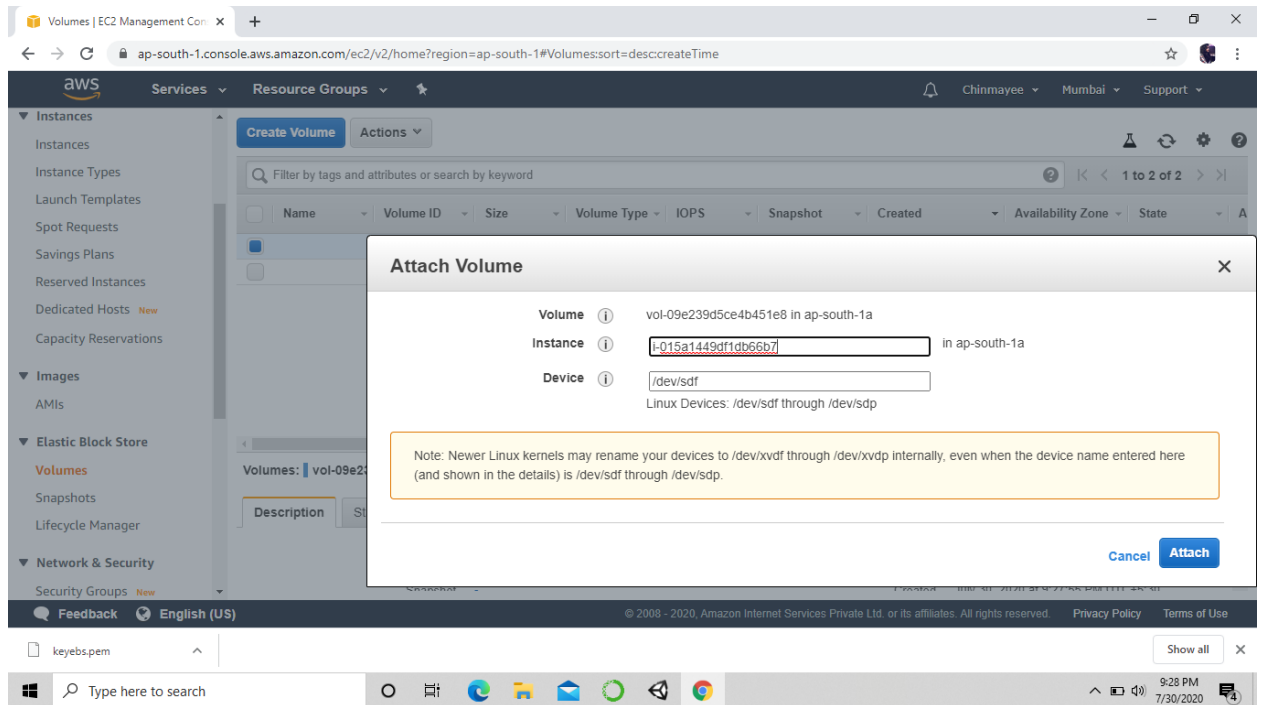
- Volume Type:** General Purpose SSD (gp2)
- Size (GiB):** 1 (Min: 1 GiB, Max: 16384 GiB)
- IOPS:** 300 / 3000 (Baseline of 3 IOPS per GiB with a minimum of 100 IOPS, burstable to 3000 IOPS)
- Availability Zone:** ap-south-1a
- Throughput (MB/s):** Not applicable
- Snapshot ID:** Select a snapshot
- Encryption:** ☐ Encrypt this volume

At the bottom, there is a section for 'Key' (128 characters maximum) and 'Value' (256 characters maximum). The page footer includes 'Feedback', 'English (US)', '© 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.', 'Privacy Policy', and 'Terms of Use'.



Step 2 – Attach EBS Volume to an Instance using the following steps.

- Open the Amazon EC2 console.
- Select Volumes in the navigation pane. Choose a volume and click the Attach Volume option.
- An Attach Volume dialog box will open. Enter the name/ID of instance to attach the volume in the Instance field or select it from the list of suggestion options.
- Click the Attach button.
- Connect to instance and make the volume available.

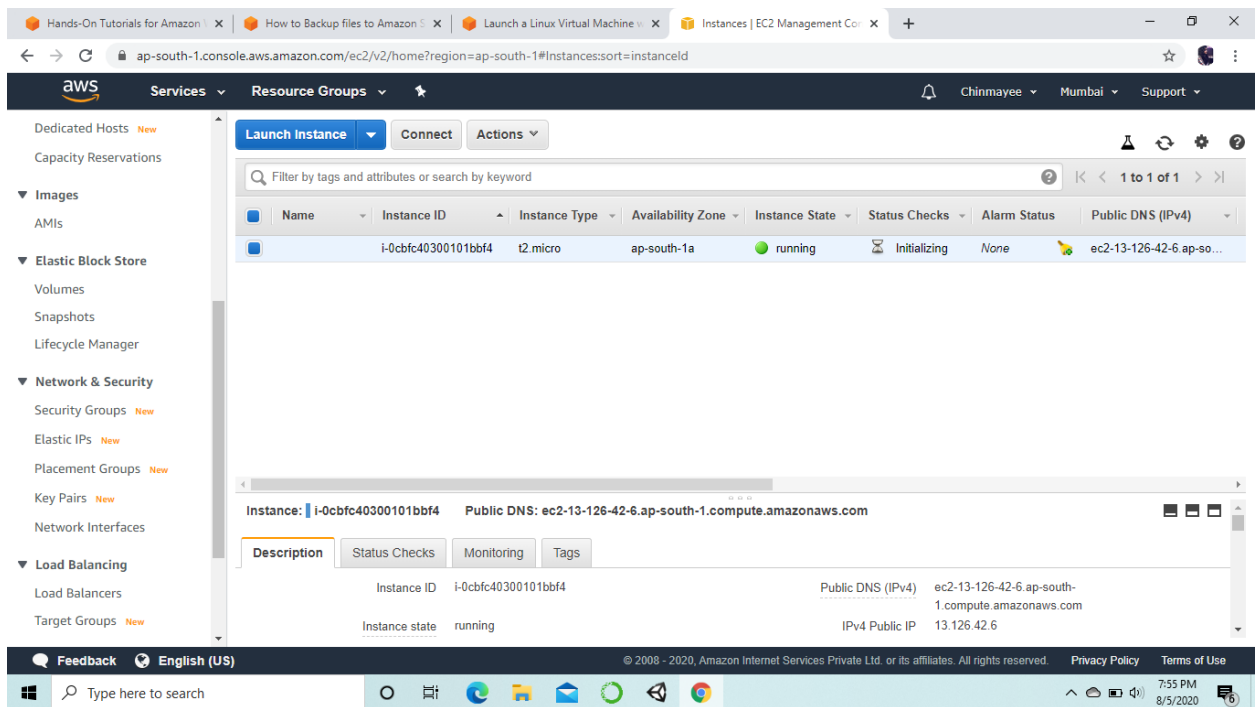


Step 3 – Detach a volume from Instance.

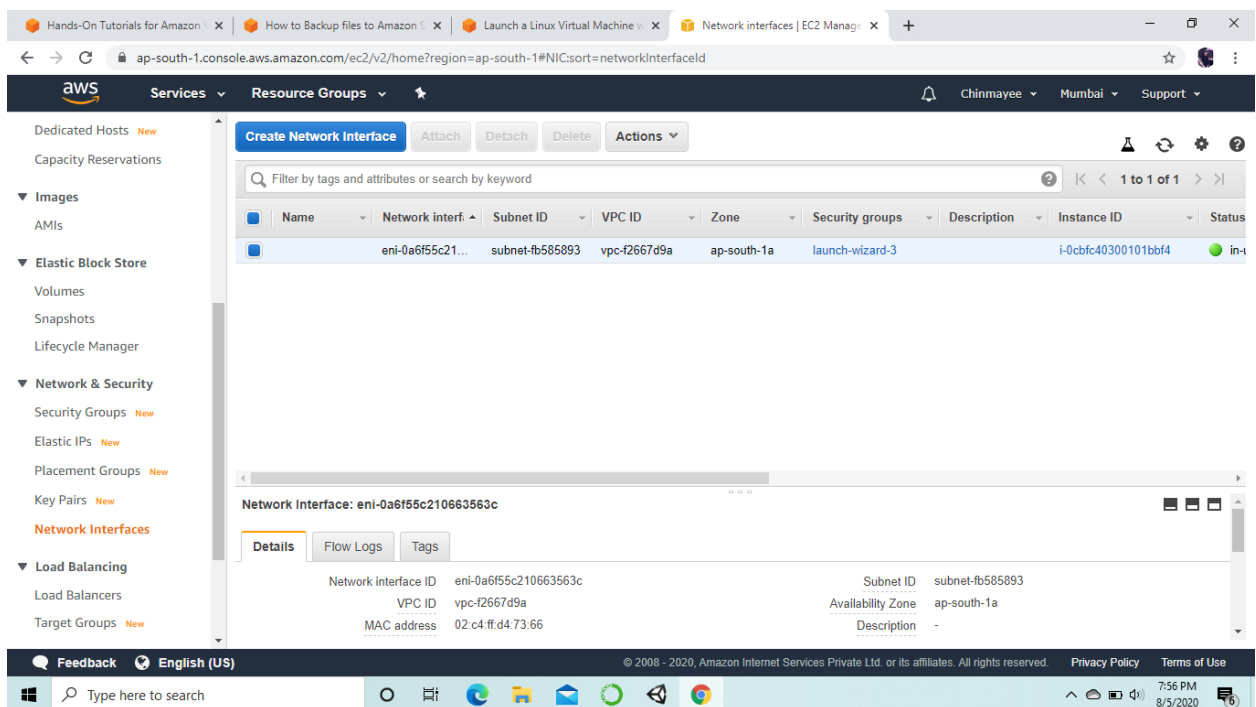
- First, use the command `/dev/sdf` in `cmd` to unmount the device.
- Open the Amazon EC2 console.
- In the navigation pane, select the Volumes option.
- Choose a volume and click the Detach Volumes option.
- A confirmation dialog box opens. Click the Yes, Detach button to confirm.

GENERATE PRIVATE IP FOR EC2 INSTANCE

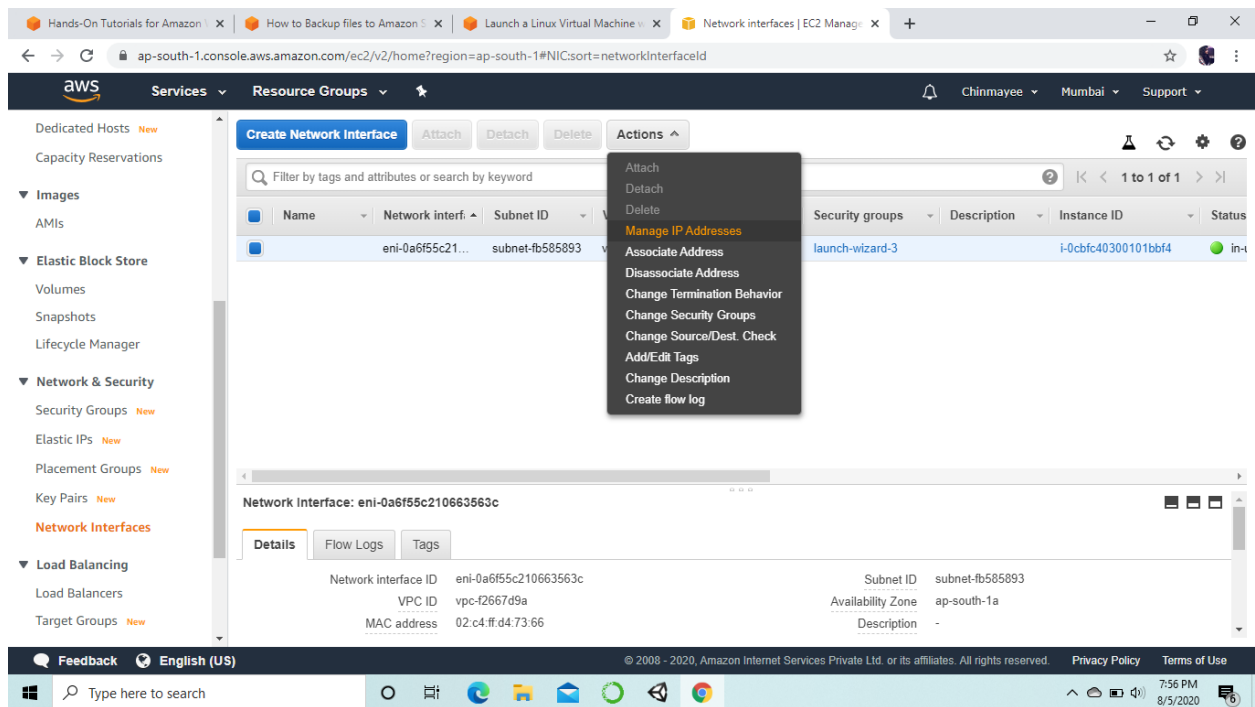
1. Login to AWS console.
2. Open the EC2 service and launch an instance.



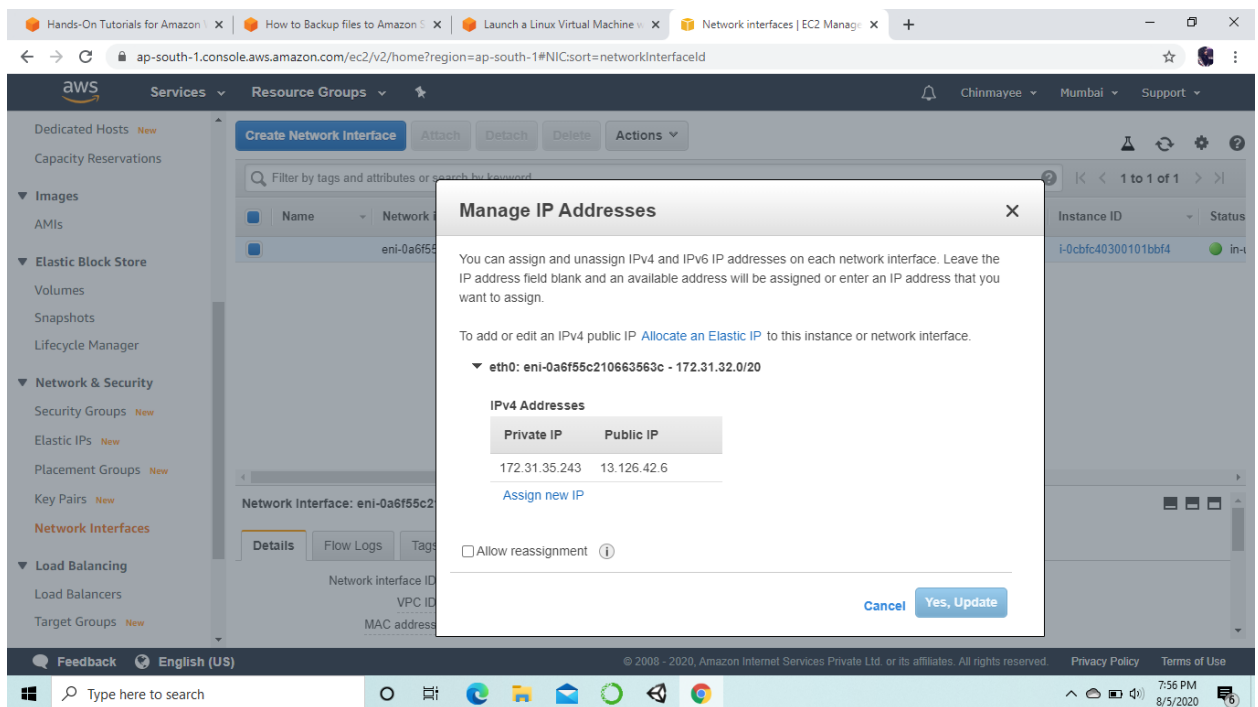
3. Under the Network and security from the dashboard, choose Network Interfaces.

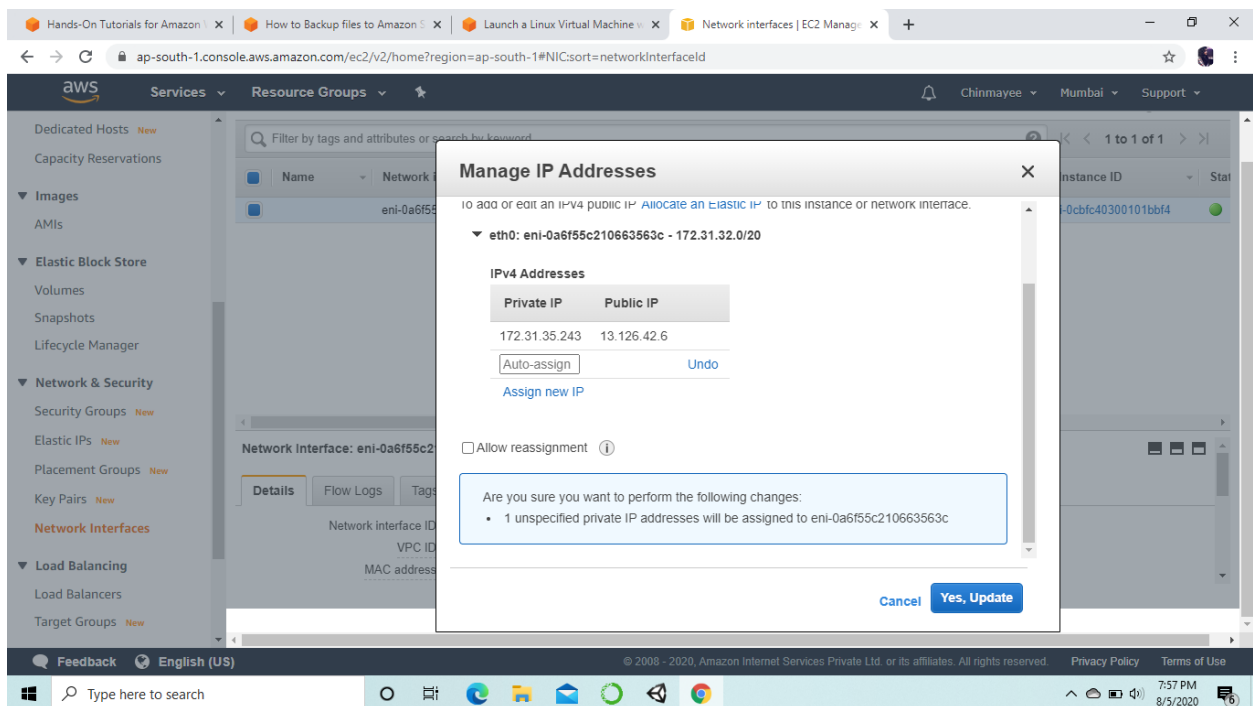


4. Choose Actions, and then choose Manage IP Addresses.

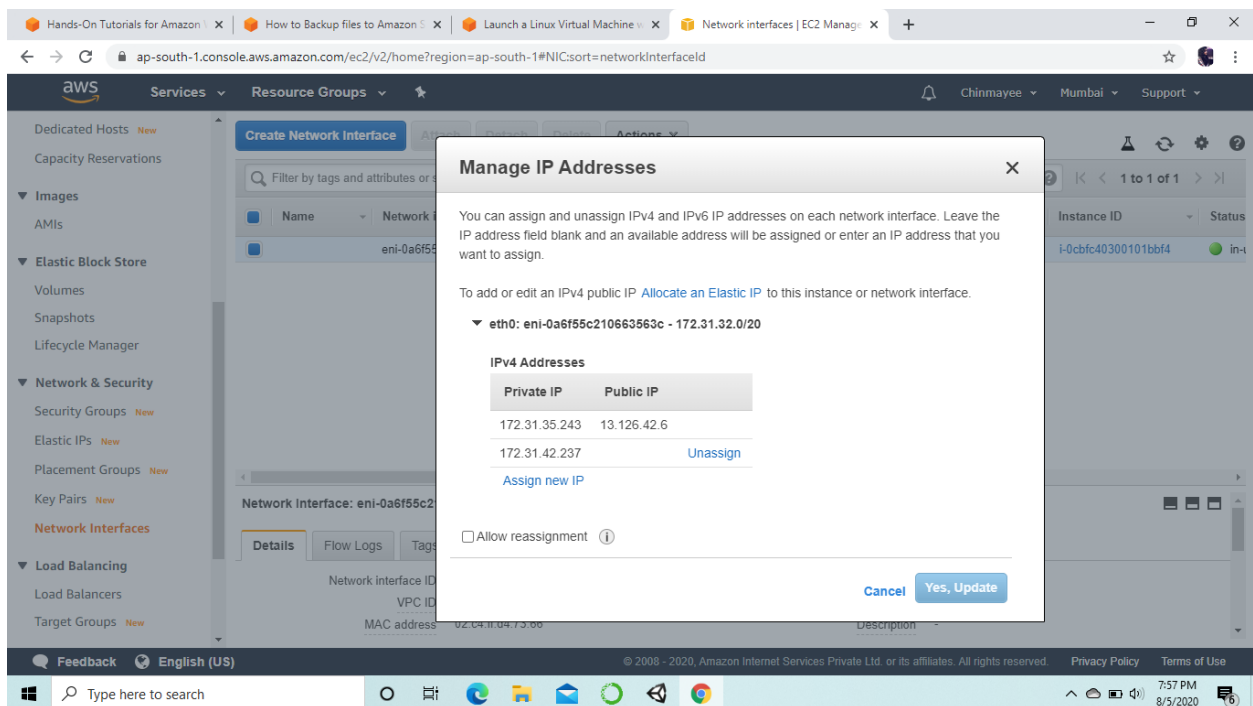


5. Assign new IP automatically.





6. Choose Yes, Update.



7. Secondary private IP is created successfully.

The screenshot shows the AWS Management Console interface. On the left, there is a navigation menu with categories like 'Images', 'Elastic Block Store', 'Network & Security', and 'Load Balancing'. The 'Network & Security' section is expanded, showing 'Network Interfaces'. The main content area displays a table of network interfaces. One interface, 'eni-0a6f55c210663563c', is selected. Below the table, the details for this specific network interface are shown, including its Subnet ID, Availability Zone, and Description.

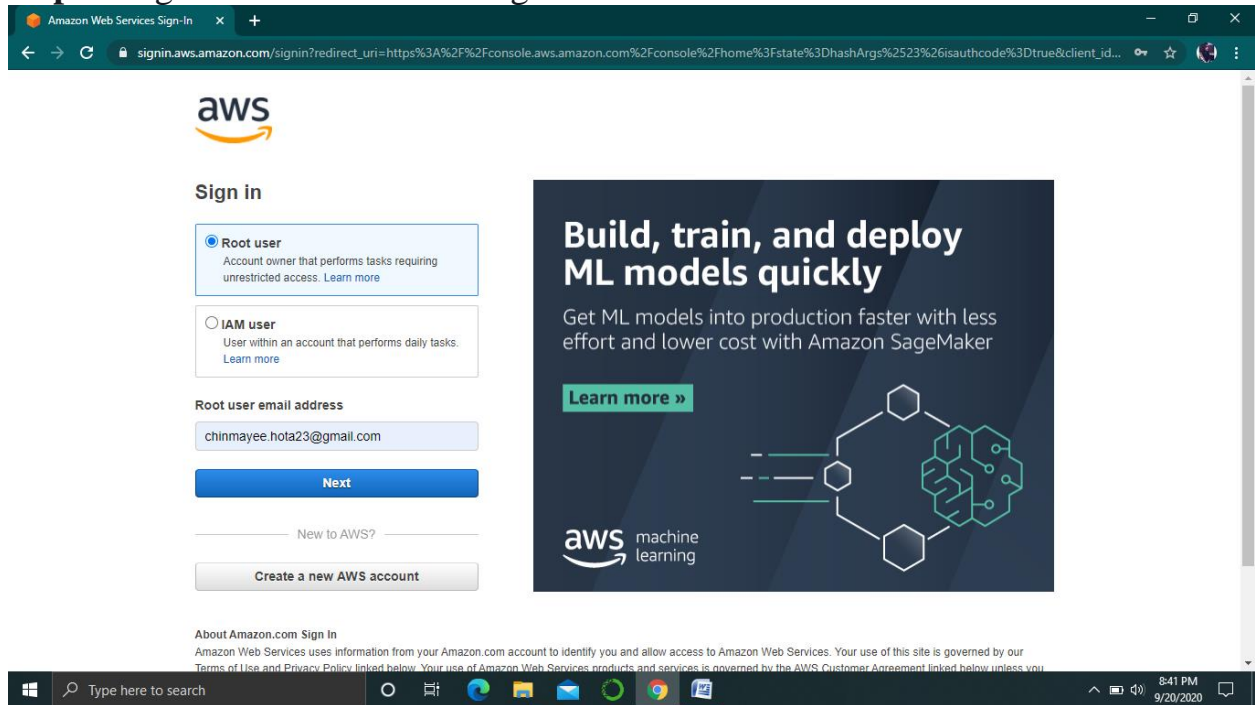
	Status	IPv4 Public IP	Primary private	Secondary private IPv4	IPv6 IPs	Network interface owner	Outpost ID
eni-0a6f55c210663563c	In-use	13.126.42.6*	172.31.35.243	172.31.42.237	-	914536736193	-

Network Interface: eni-0a6f55c210663563c

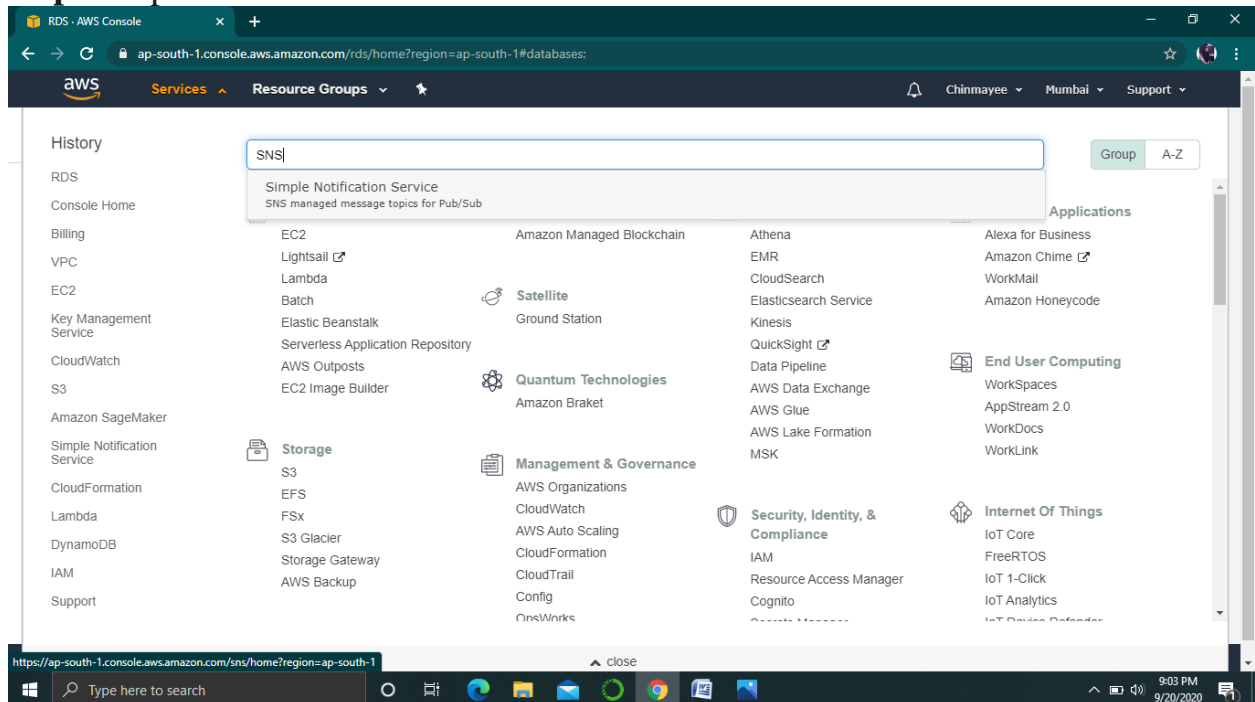
Details	Flow Logs	Tags
<p>Network interface ID: eni-0a6f55c210663563c</p> <p>VPC ID: vpc-f2667d9a</p> <p>MAC address: 02:c4:ff:d4:73:66</p>		<p>Subnet ID: subnet-fb585893</p> <p>Availability Zone: ap-south-1a</p> <p>Description: -</p>

AMAZON SNS

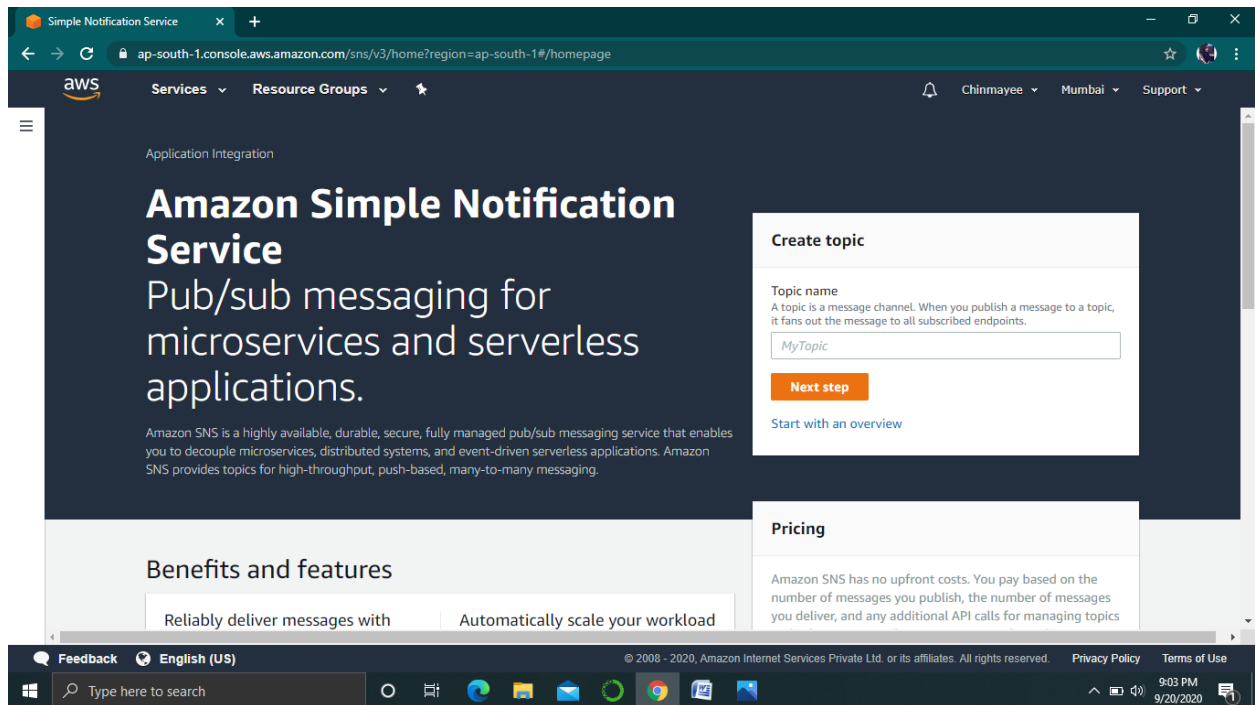
Step 1: Sign in to the AWS Management Console.



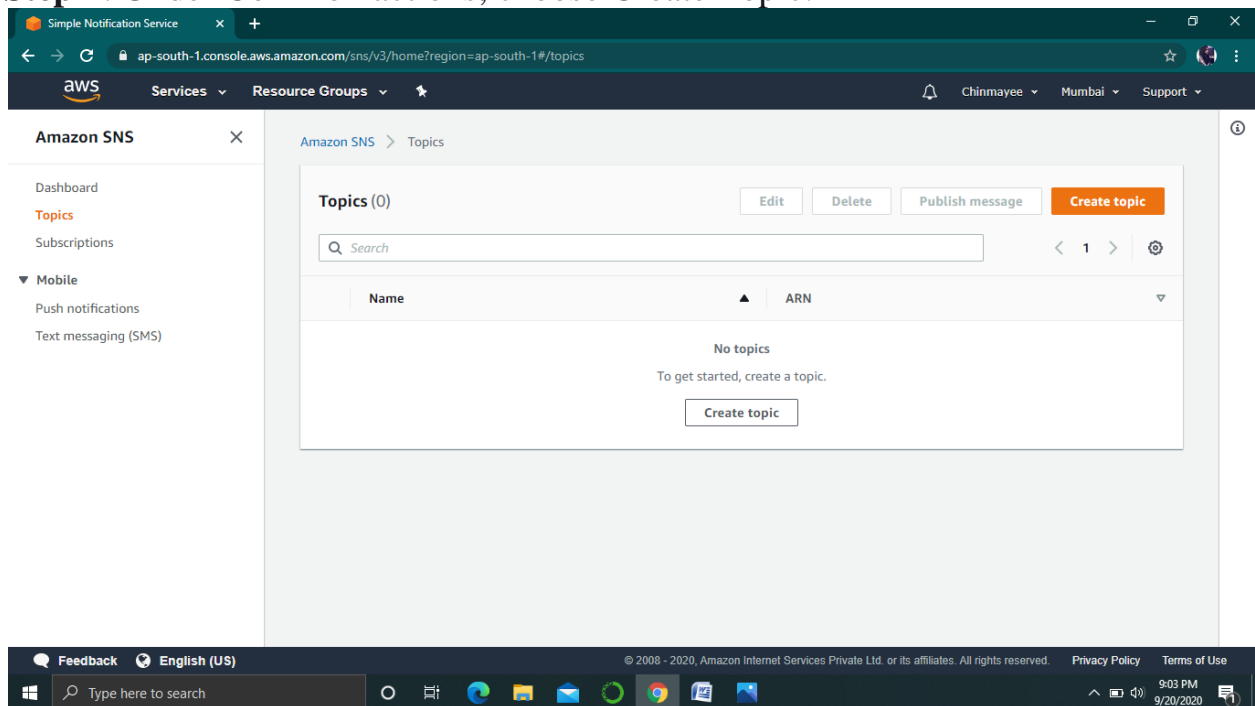
Step 2: Open the service as SNS.



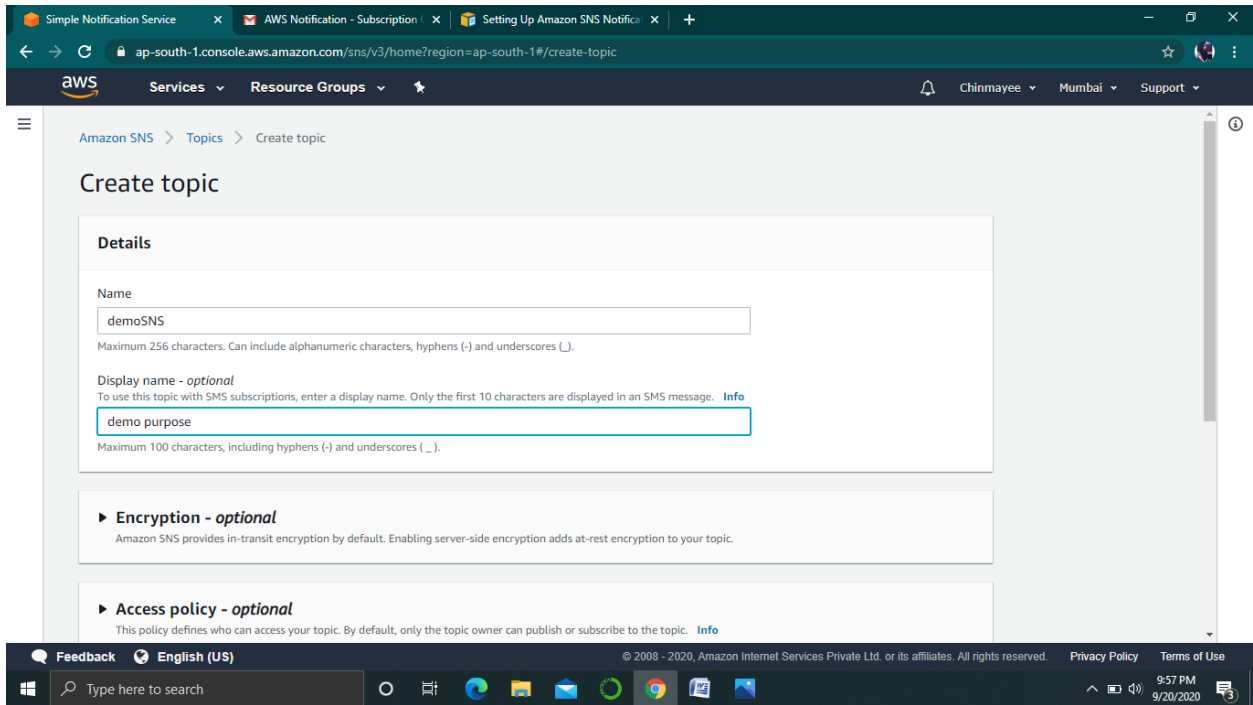
Step 3: The Amazon SNS dashboard will appear as.



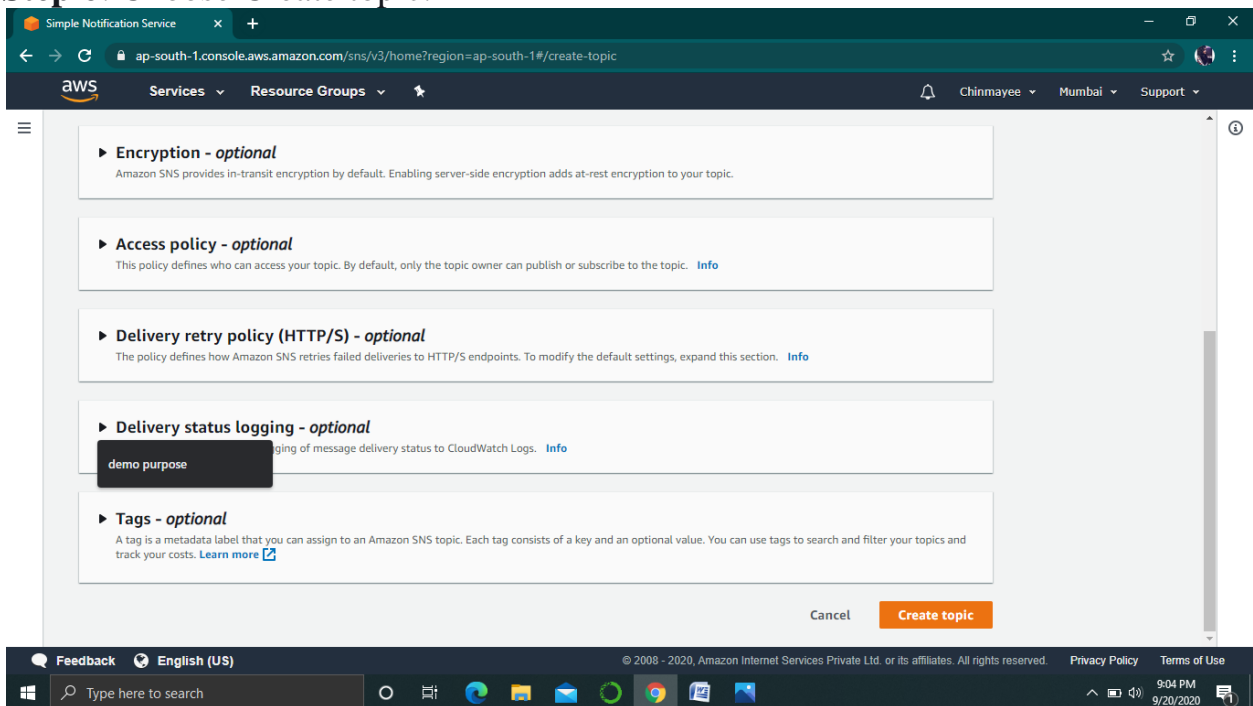
Step 4: Under Common actions, choose Create Topic.



Step 5: In the Create new topic dialog box, for Topic name, enter a name for the topic.

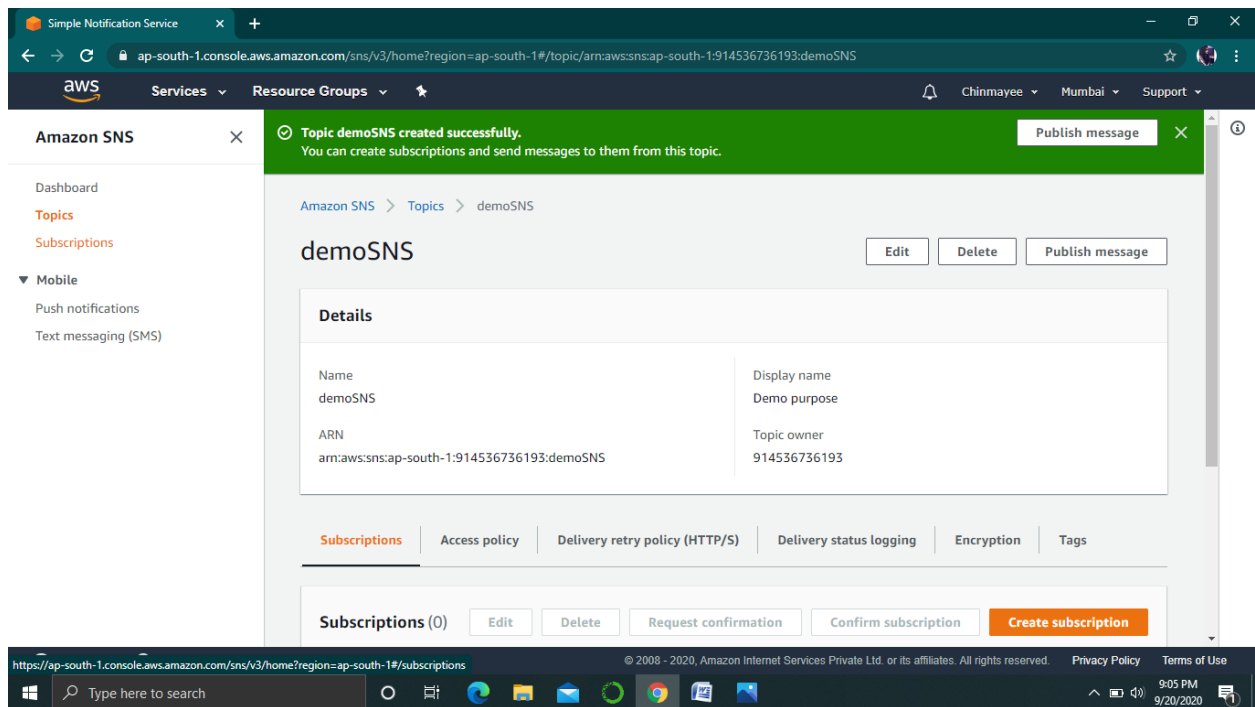


Step 6: Choose Create topic.



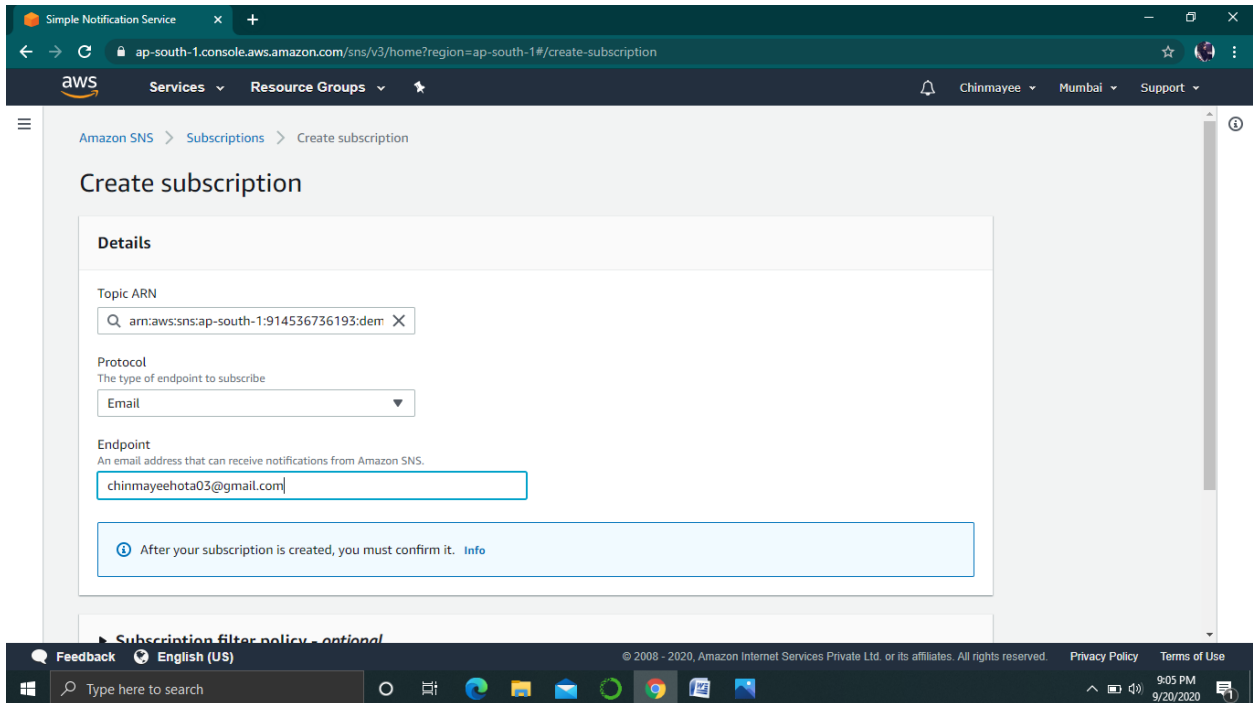
Step 7: Copy the Topic ARN for the next task.

Step 8: Check the status of the topic.

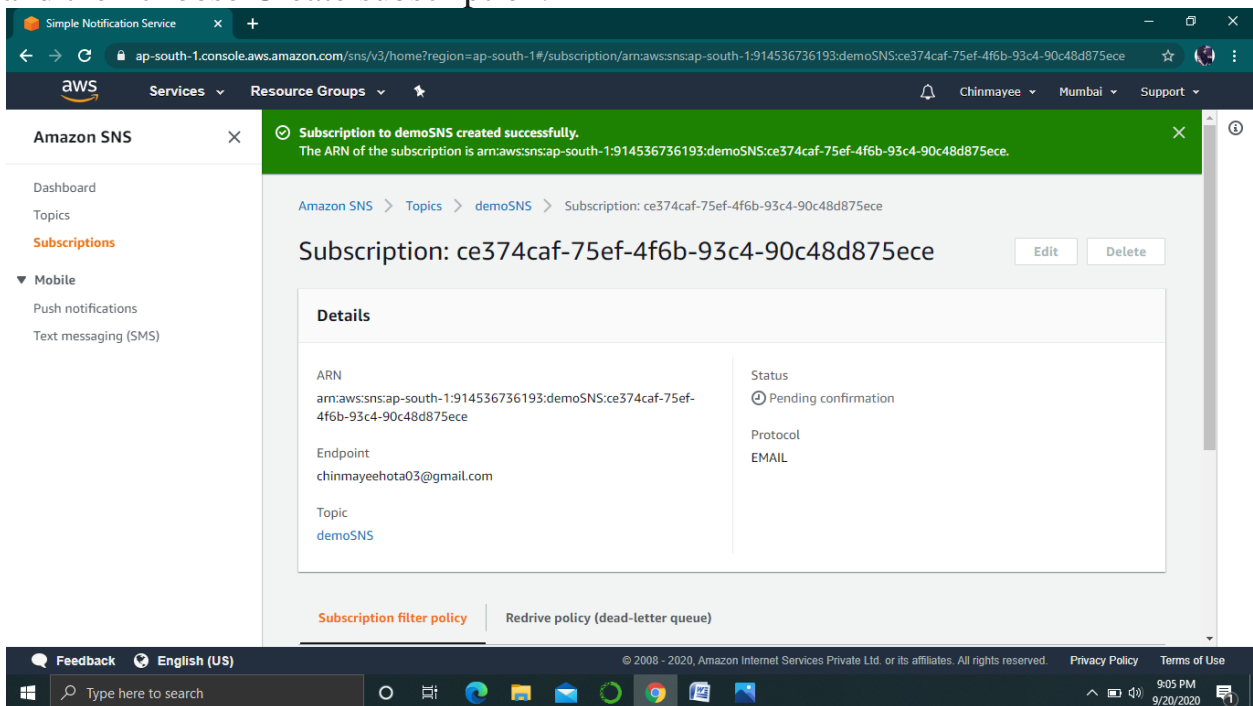


TO SUBSCRIBE TO AN SNS TOPIC

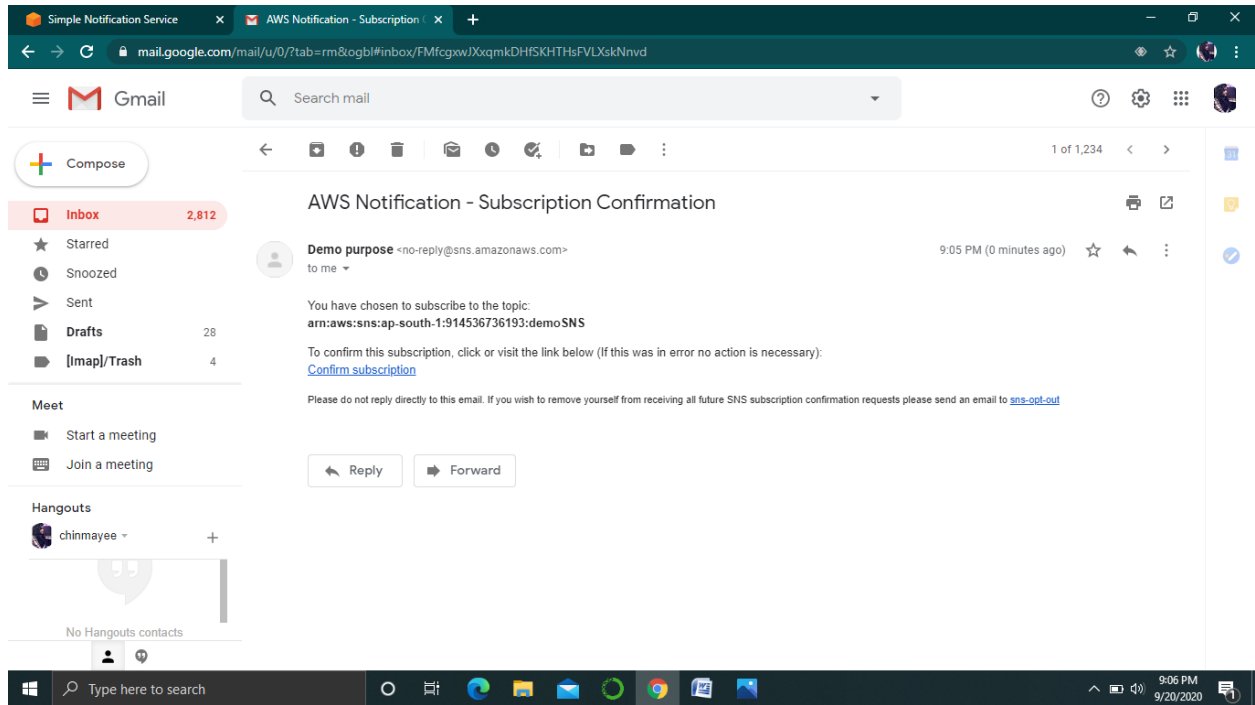
1. In the navigation pane, choose Subscriptions, Create subscription.
2. In the Create subscription dialog box, for Topic ARN, paste the topic ARN that you created in the previous task.
3. For Protocol, choose Email.



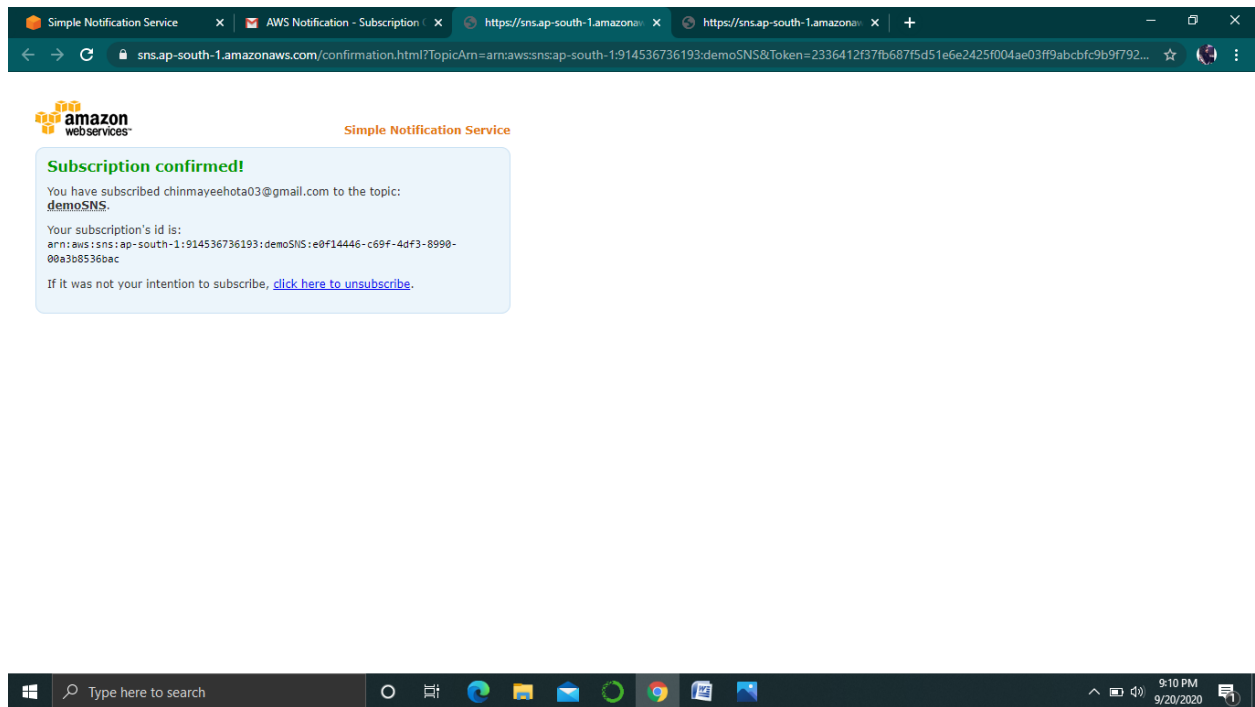
4. For Endpoint, enter an email address that you can use to receive the notification, and then choose Create subscription.



5. From your email application, open the message from AWS Notifications and confirm your subscription.



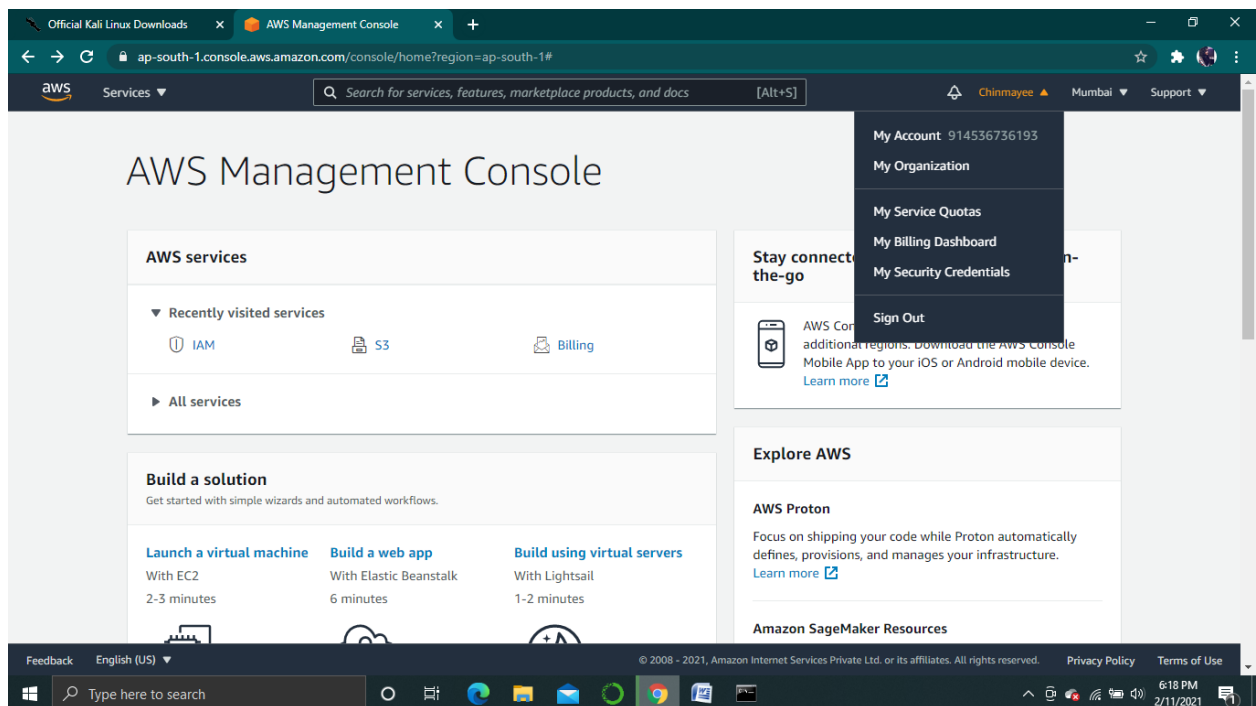
6. Your web browser displays a confirmation response from Amazon SNS.



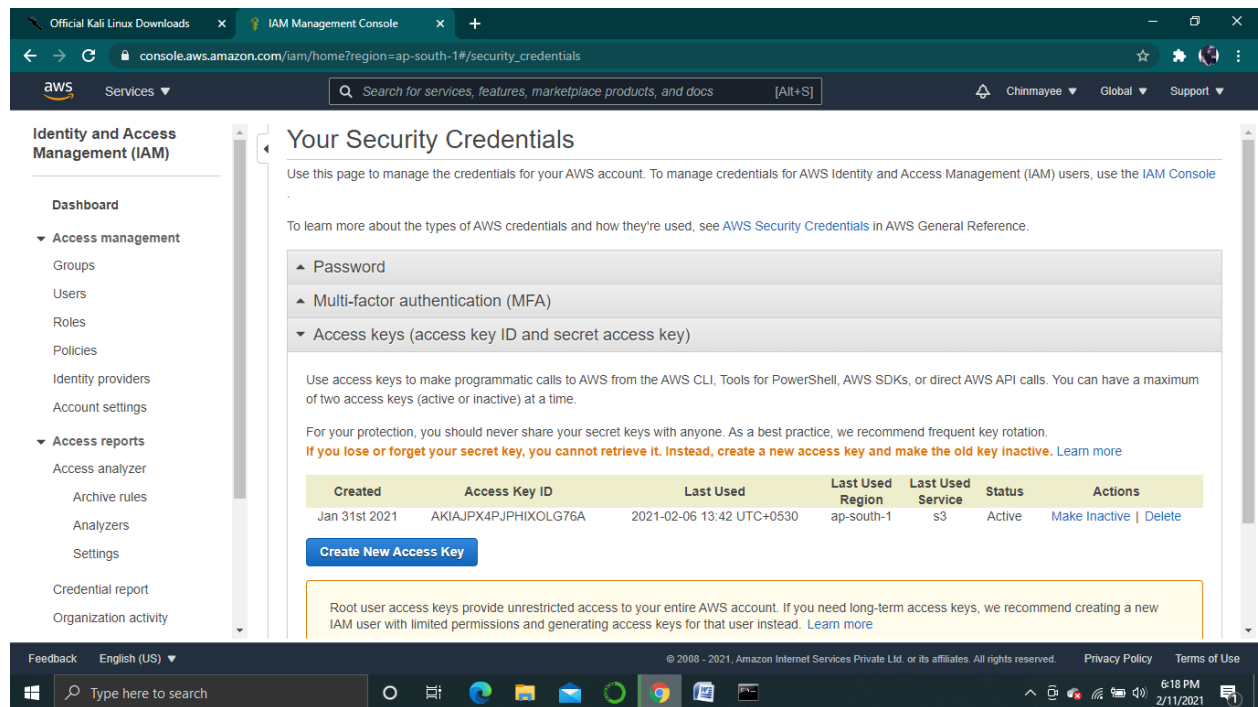
AWS CLI FOR BUCKET CREATION

Steps to be followed:-

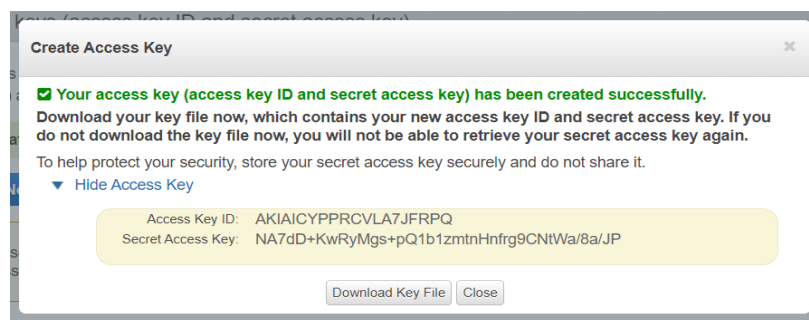
- 1st download AWS CLI MSI installer for Windows
- Install and run MSI installer
- Now in the search bar of your computer or laptop search for cmd to open command prompt in window.
- Now in the command prompt write a command (**aws --version**)
- Now again write a command (**aws configure**) , after enter the command it will ask for access key.
- So for access key we have to go to AWS Management Console.
- Then in the account info go to **My Security Credentials**.

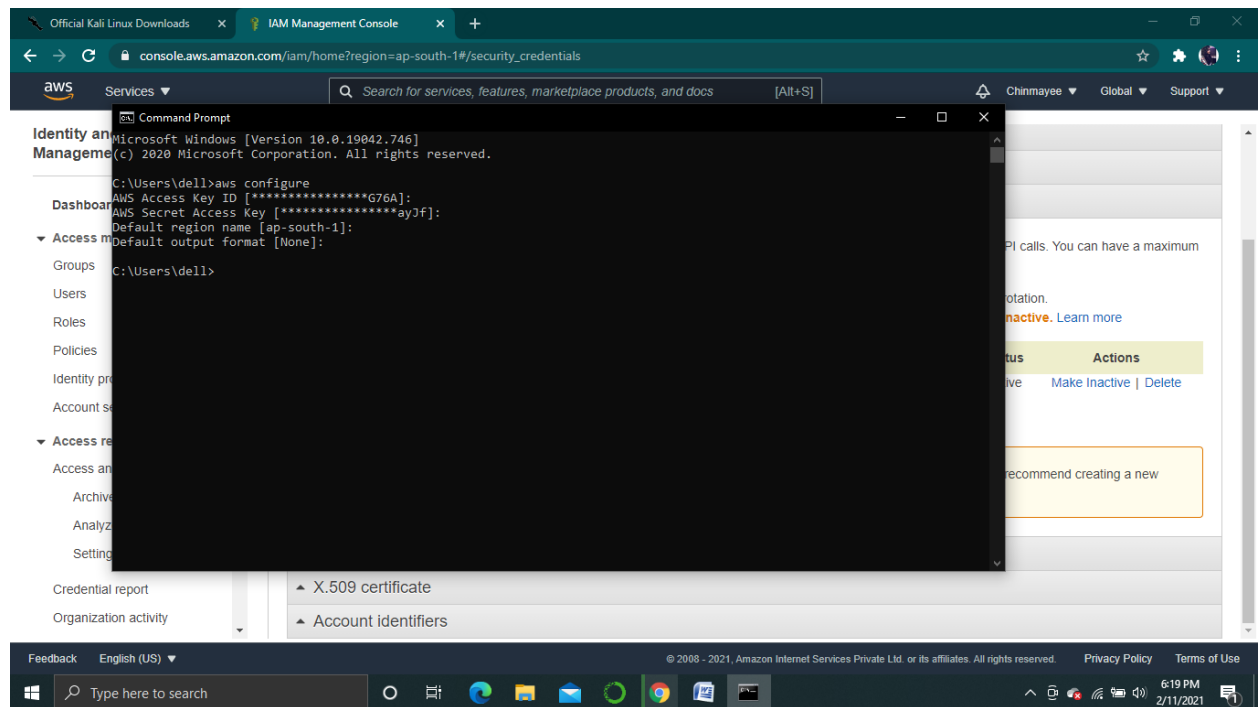


- Under security credentials it has a column of Access and secret key.
- Click on Create New Access Key.

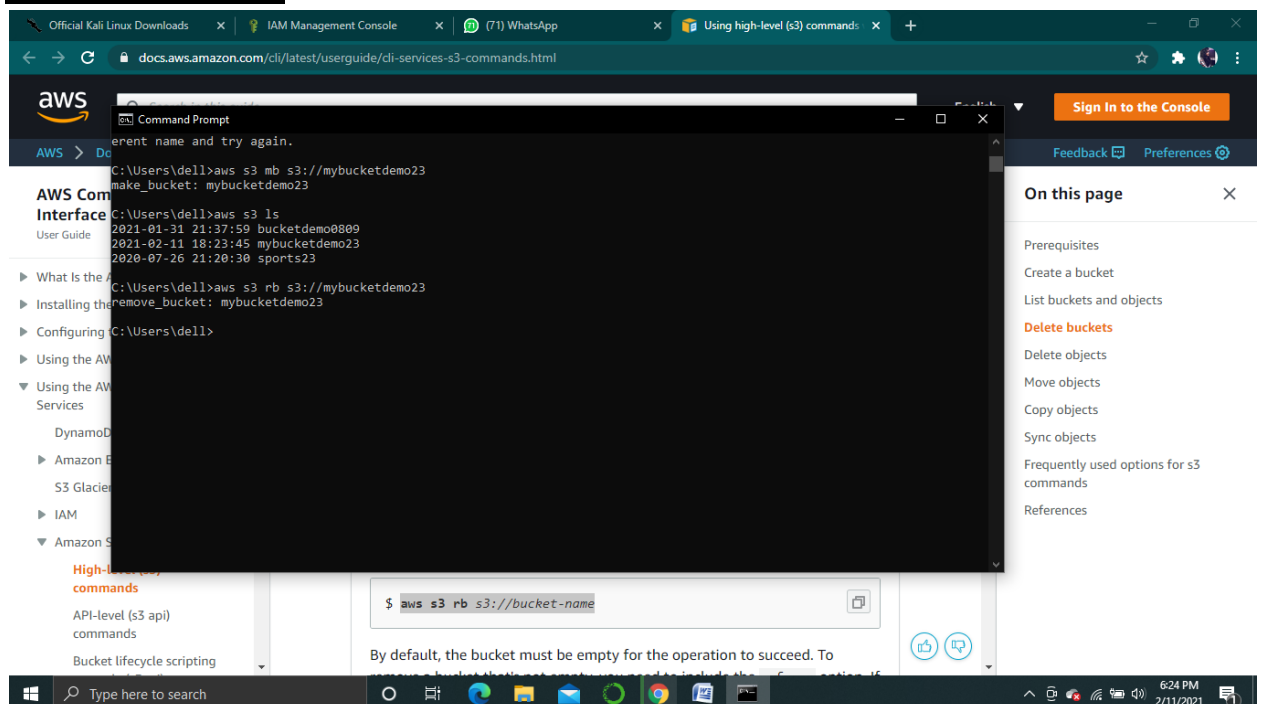


- Here is the Access key and Secret Key.
- Now 1st copy the Access Key and paste in the command prompt.
- Again copy Secret Key and paste it in Command prompt.
- Then it will ask for Region. So in region give the region name as **ap-south-1**.



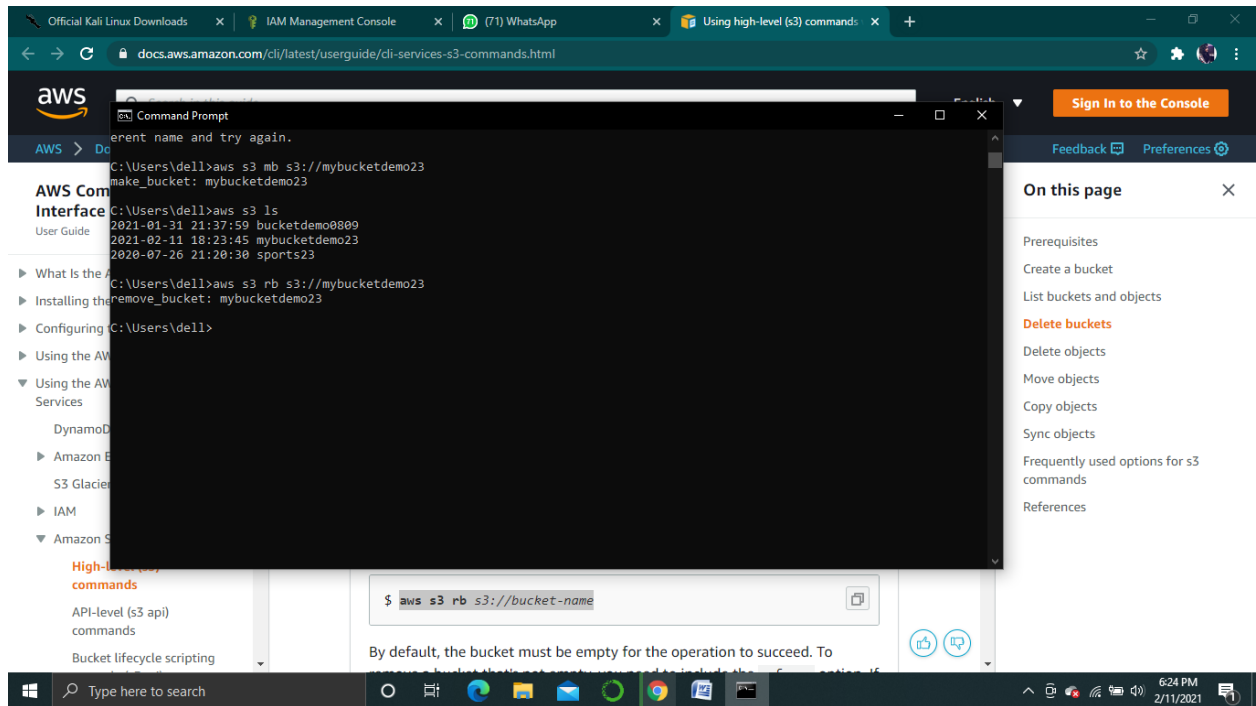


- Now to make or create a bucket we need to execute a command **aws s3 mb s3://bucket_name**



- Simultaneously check that the bucket is created in S3 service.
- Now to confirm in command prompt write a command `aws s3 ls`, it will show you all the buckets present in the s3 service.

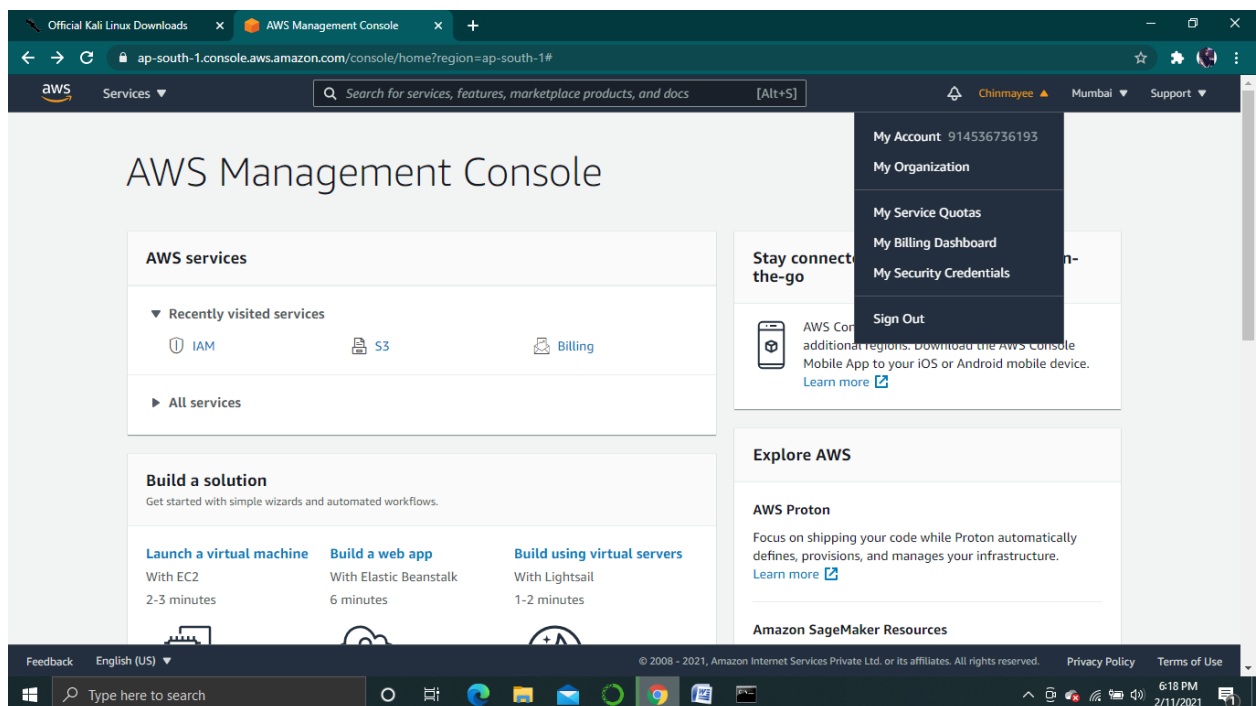
- Now Again to remove or delete the bucket execute a command **aws s3 rb s3://bucket_name**.
- Now check in the s3 service that the bucket is removed or not.
- In command prompt write command `aws s3 ls` to confirm that the bucket is deleted.



AWS CLI SETUP AND CONFIGURATION ON WINDOWS

Steps to be followed:-

- 1st download AWS CLI MSI installer for Windows
- Install and run MSI installer
- Now in the search bar of your computer or laptop search for cmd to open command prompt in window.
- Now in the command prompt write a command (**aws --version**)
- Now again write a command (**aws configure**) , after enter the command it will ask for access key.
- So for access key we have to go to AWS Management Console.
- Then in the account info go to **My Security Credentials**.



- Under security credentials it has a column of Access and secret key.
- Click on Create New Access Key.

Identity and Access Management (IAM)

- Dashboard
- Access management
 - Groups
 - Users
 - Roles
 - Policies
 - Identity providers
 - Account settings
- Access reports
 - Access analyzer
 - Archive rules
 - Analyzers
 - Settings
 - Credential report
 - Organization activity

Your Security Credentials

Use this page to manage the credentials for your AWS account. To manage credentials for AWS Identity and Access Management (IAM) users, use the [IAM Console](#).

To learn more about the types of AWS credentials and how they're used, see [AWS Security Credentials](#) in AWS General Reference.

- ▲ Password
- ▲ Multi-factor authentication (MFA)
- ▼ Access keys (access key ID and secret access key)

Use access keys to make programmatic calls to AWS from the AWS CLI, Tools for PowerShell, AWS SDKs, or direct AWS API calls. You can have a maximum of two access keys (active or inactive) at a time.

For your protection, you should never share your secret keys with anyone. As a best practice, we recommend frequent key rotation. **If you lose or forget your secret key, you cannot retrieve it. Instead, create a new access key and make the old key inactive.** [Learn more](#)

Created	Access Key ID	Last Used	Last Used Region	Last Used Service	Status	Actions
Jan 31st 2021	AKIAJPX4PJPHIXOLG76A	2021-02-06 13:42 UTC+0530	ap-south-1	s3	Active	Make Inactive Delete

[Create New Access Key](#)

Root user access keys provide unrestricted access to your entire AWS account. If you need long-term access keys, we recommend creating a new IAM user with limited permissions and generating access keys for that user instead. [Learn more](#)

- Here is the Access key and Secret Key.
- Now 1st copy the Access Key and paste in the command prompt.
- Again copy Secret Key and paste it in Command prompt.
- Then it will ask for Region. So in region give the region name as **ap-south-1**.

Create Access Key

✓ Your access key (access key ID and secret access key) has been created successfully.

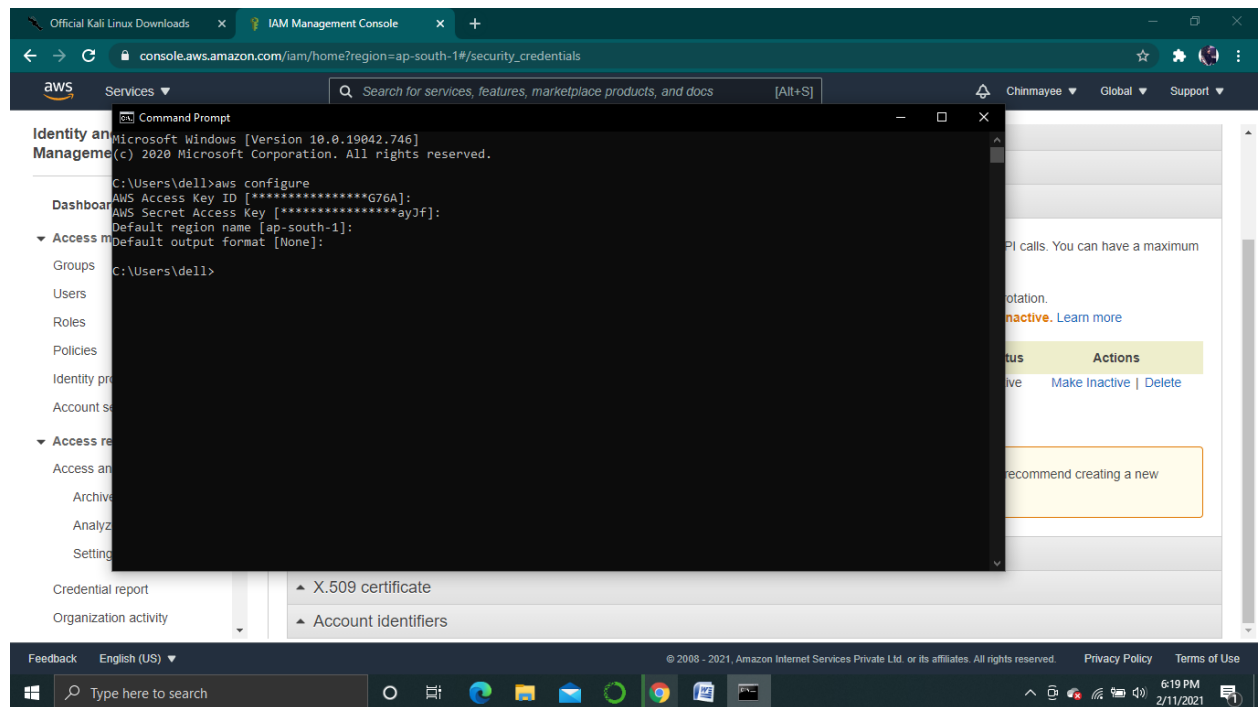
Download your key file now, which contains your new access key ID and secret access key. If you do not download the key file now, you will not be able to retrieve your secret access key again.

To help protect your security, store your secret access key securely and do not share it.

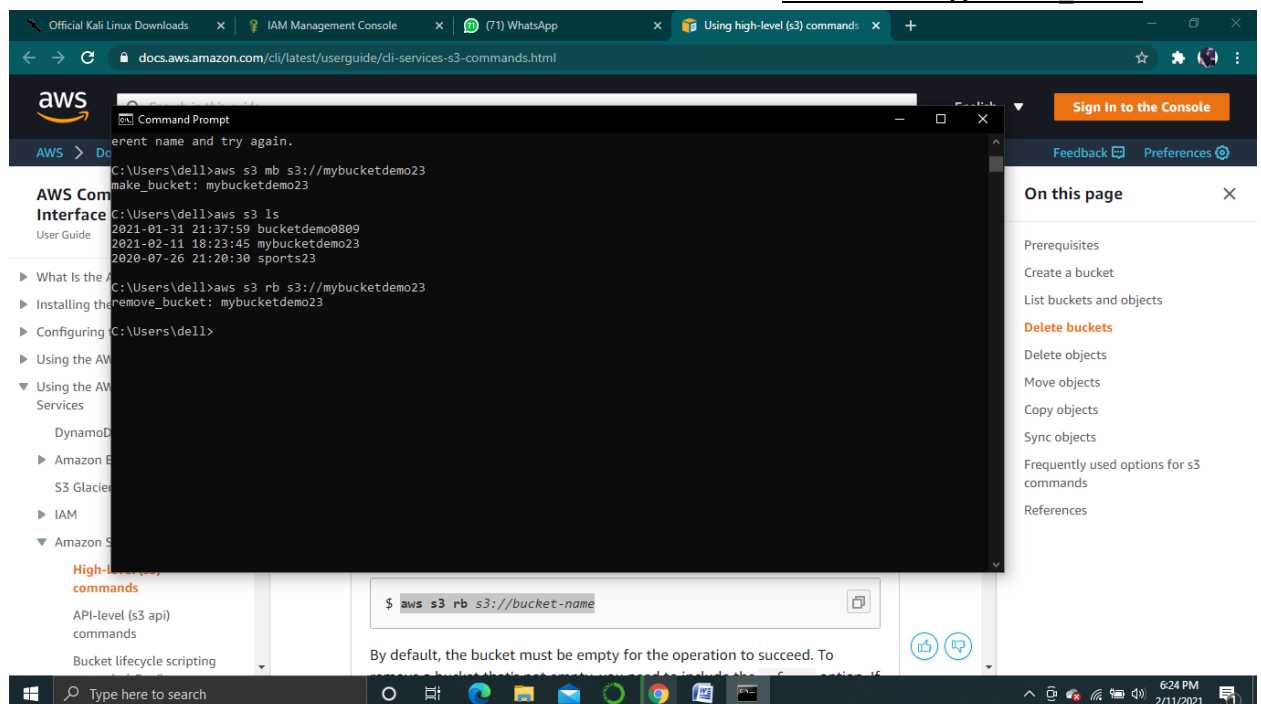
▼ [Hide Access Key](#)

Access Key ID: AKIAICYPPRCVLA7JFRPQ
Secret Access Key: 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

[Download Key File](#) [Close](#)

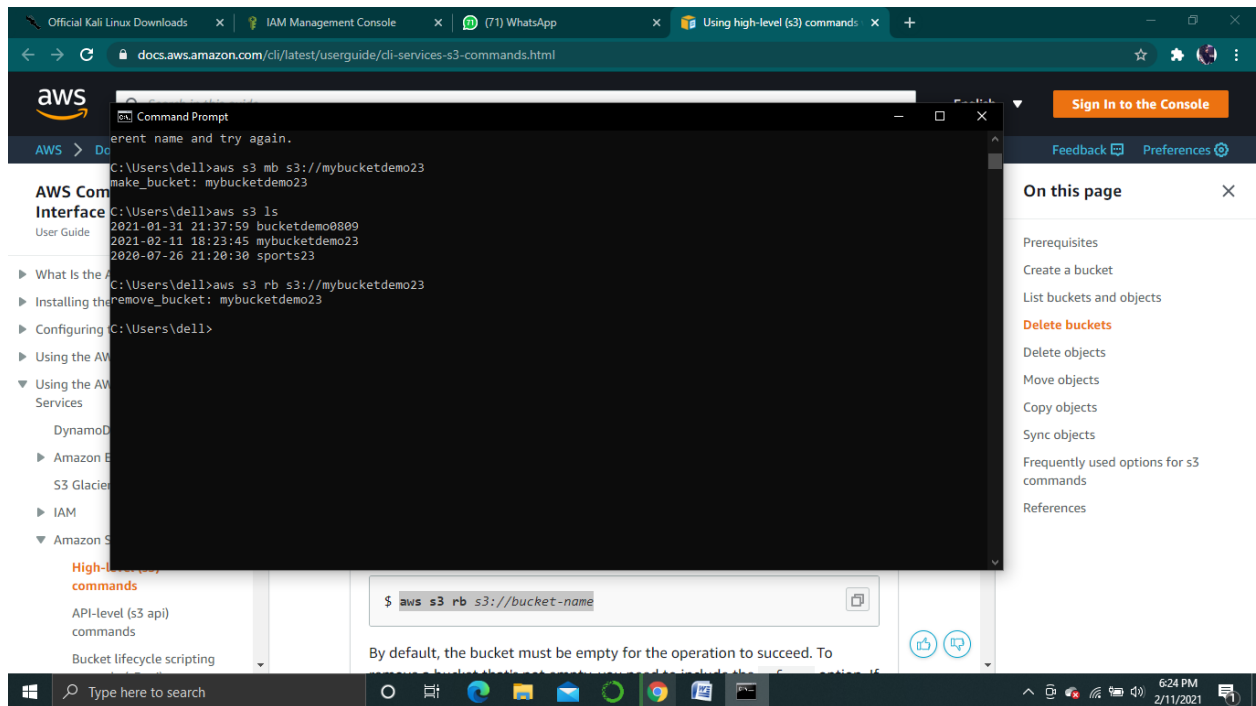


- Now to make or create a bucket we need to execute a command **aws s3 mb s3://bucket_name**



- Simultaneously check that the bucket is created in S3 service.
- Now to confirm in command prompt write a command **aws s3 ls**, it will show you all the buckets present in the s3 service.

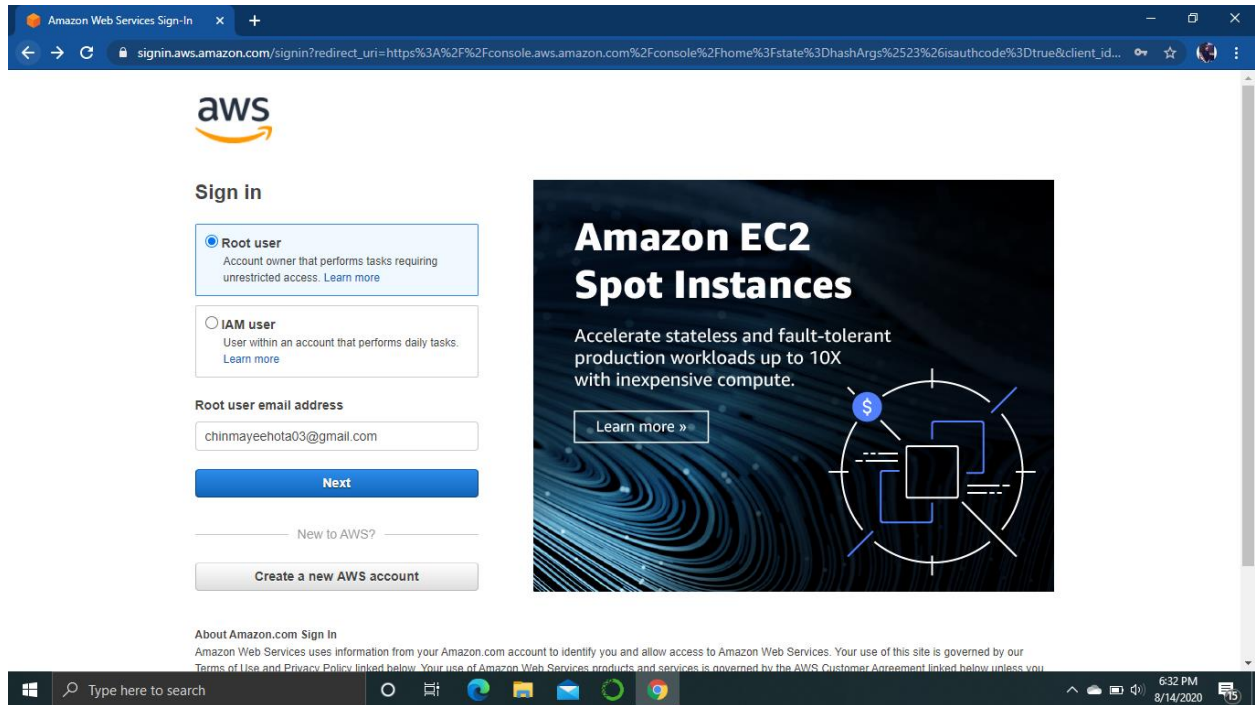
- Now Again to remove or delete the bucket execute a command **aws s3 rb s3://bucket_name**.
- Now check in the s3 service that the bucket is removed or not.
- In command prompt write command **aws s3 ls** to confirm that the bucket is deleted.



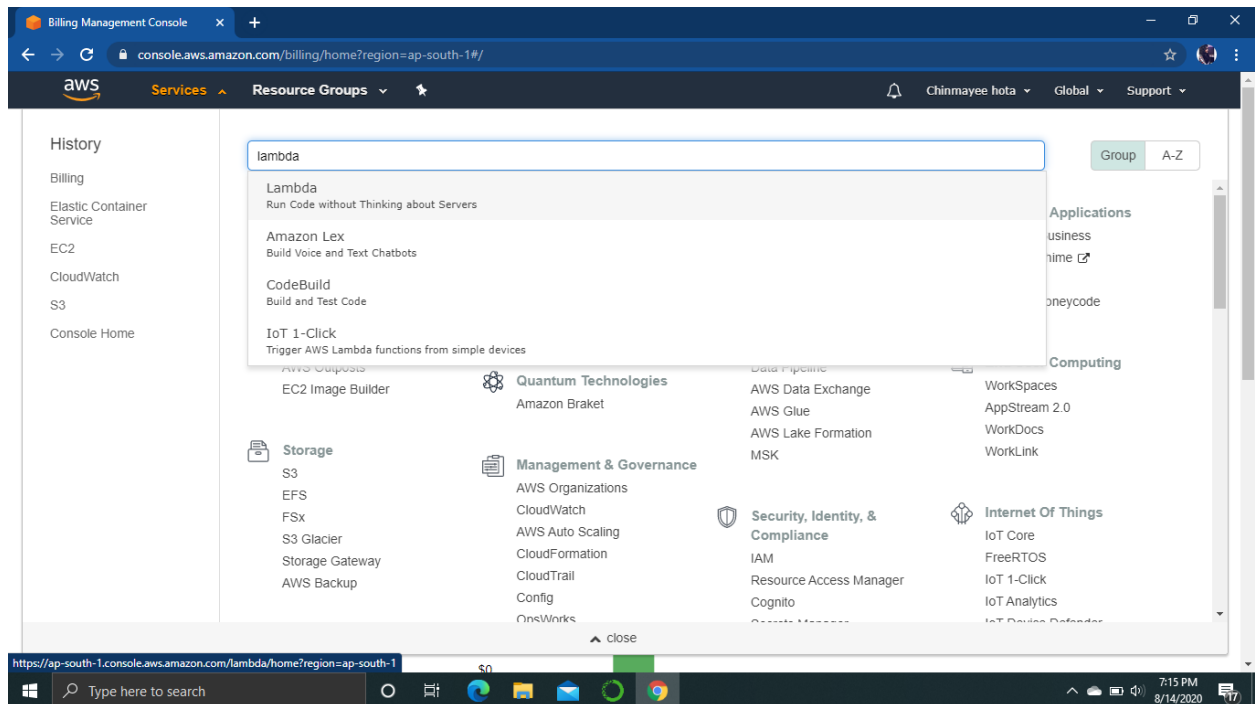
Conclusion- We have successfully created an access key and a secret key and also executed commands to create and remove buckets in command prompt.

LAMBDA FUNCTION

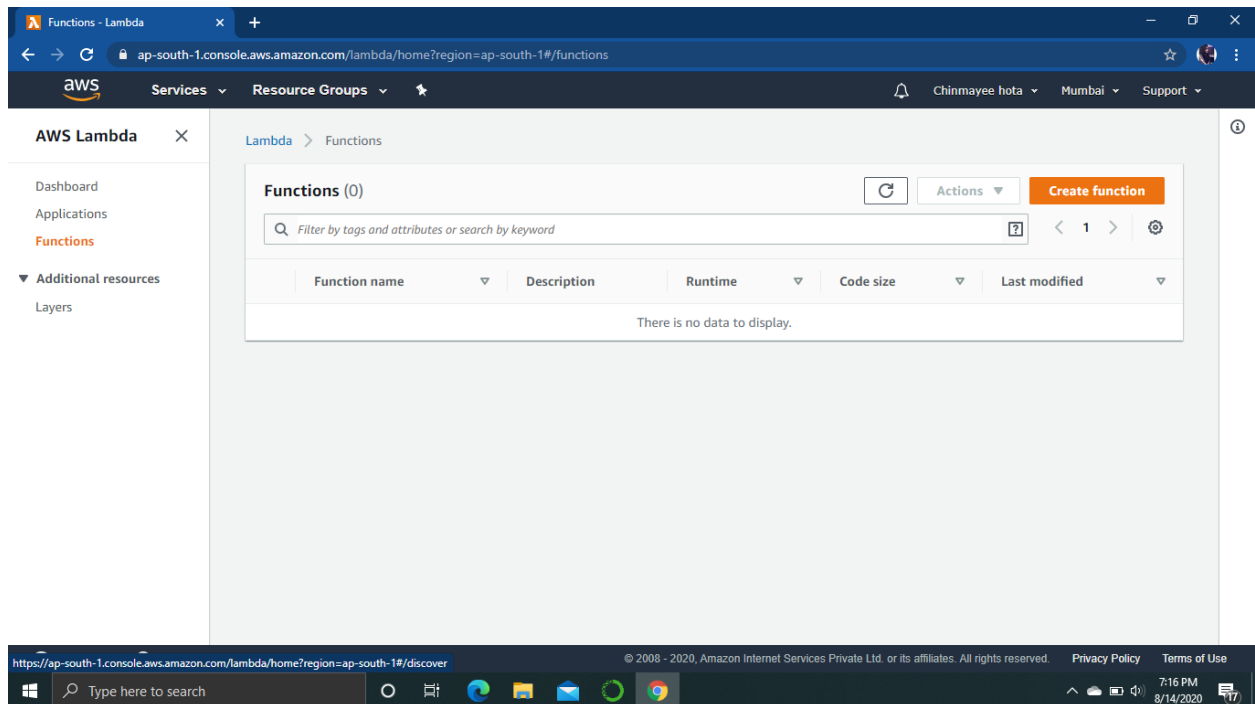
Step 1: Login to AWS console.



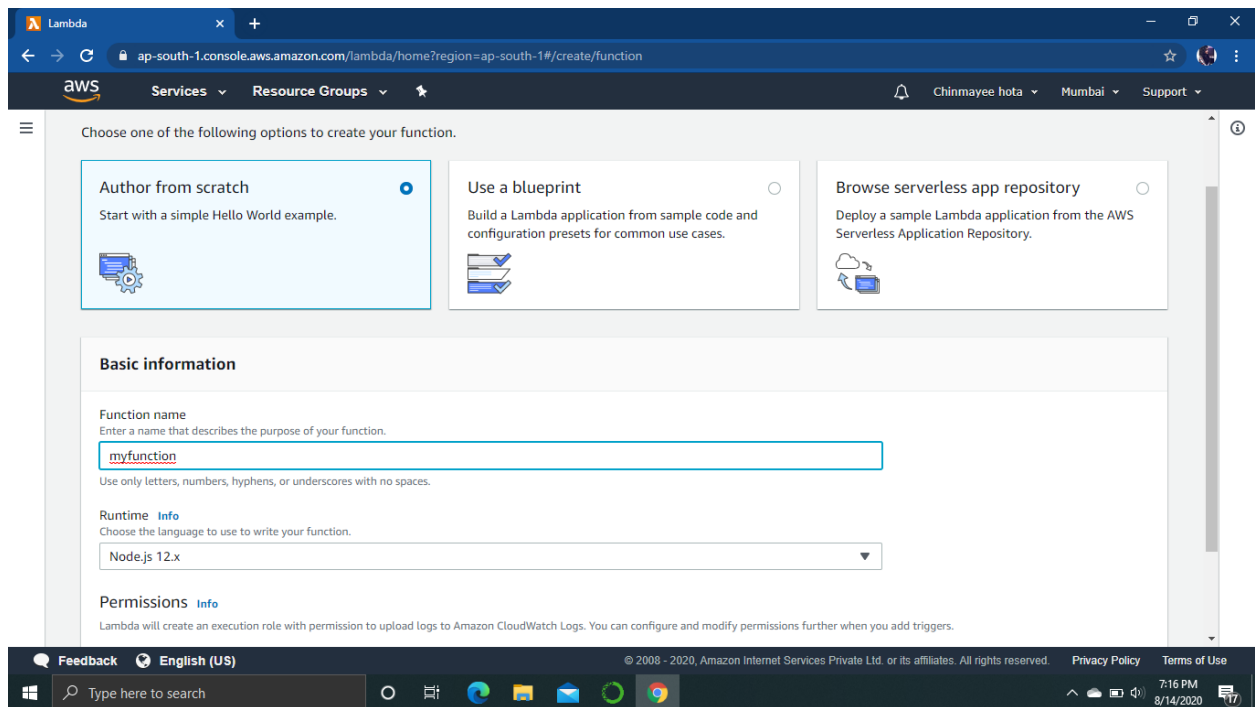
Step 2: Open the service as lambda.



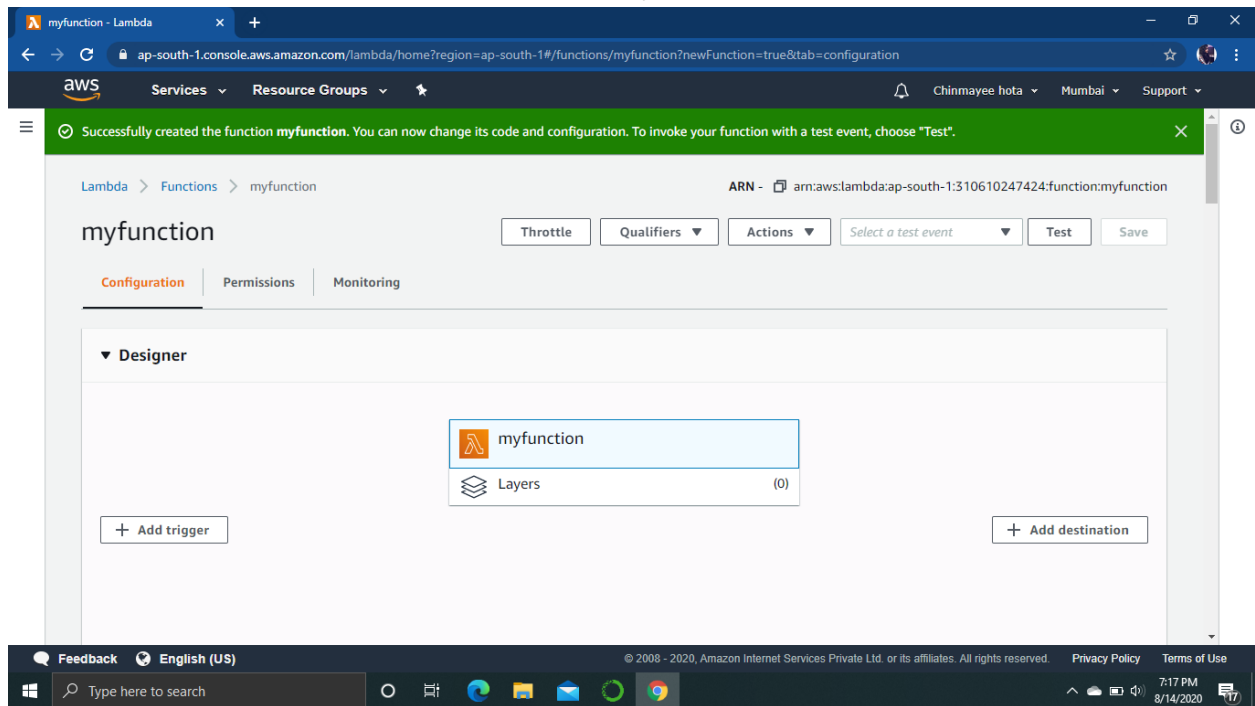
Step 3: From the dashboard select Create function.



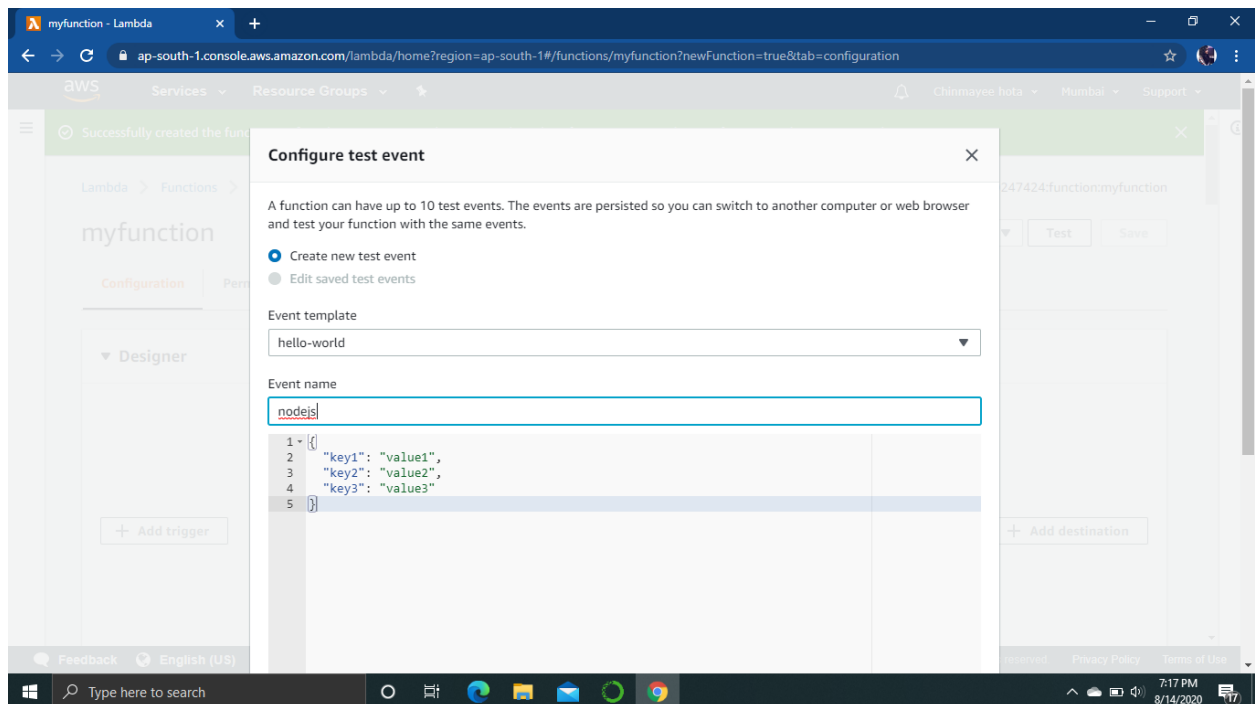
Step 4: Select author from scratch and configure the details such as function name, language to run the function as Node.js



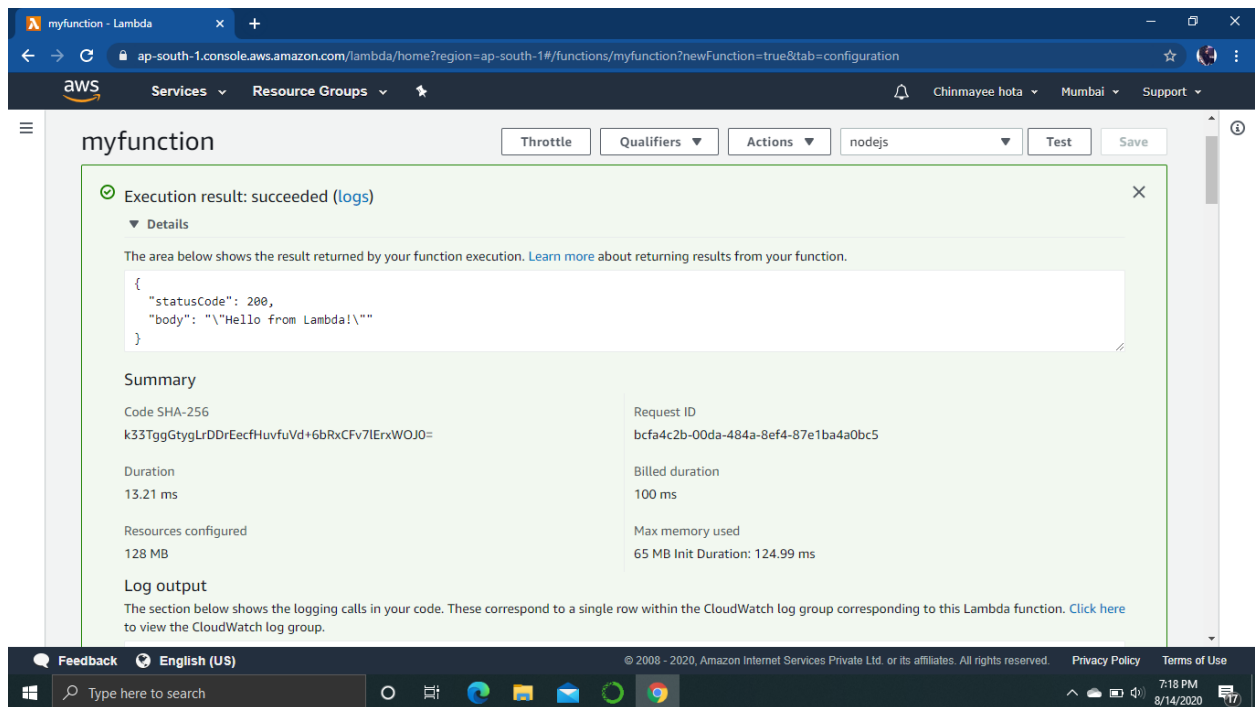
Step 4: The function is created successfully.



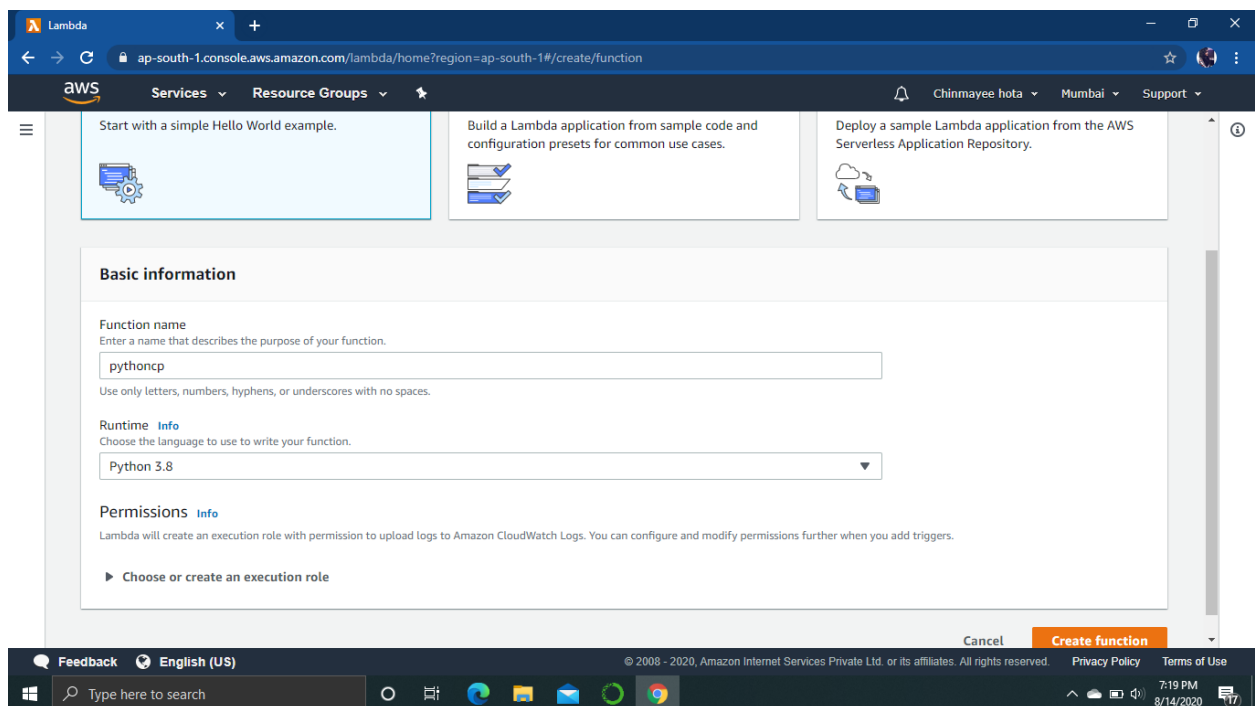
Step 5: Select test and configure test event name and all details. Then select create.



Step 6: Check the status of the event from the dashboard.



Step 7: Create another function for the language python and repeat the same process till it is executed.



pythoncp - Lambda

ap-south-1.console.aws.amazon.com/lambda/home?region=ap-south-1#/functions/pythoncp?newFunction=true&tab=configuration

Services Resource Groups

Chinmayee hota Mumbai Support

Successfully created the function **pythoncp**. You can now change its code and configuration. To invoke your function with a test event, choose "Test".

Lambda > Functions > pythoncp

ARN - arn:aws:lambda:ap-south-1:310610247424:function:pythoncp

pythoncp

Throttle Qualifiers Actions Select a test event Test Save

Configuration Permissions Monitoring

▼ Designer

pythoncp

Layers (0)

+ Add trigger + Add destination

Feedback English (US)

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Type here to search

7:19 PM 8/14/2020

pythoncp - Lambda

ap-south-1.console.aws.amazon.com/lambda/home?region=ap-south-1#/functions/pythoncp?newFunction=true&tab=configuration

Services Resource Groups

Chinmayee hota Mumbai Support

Successfully created the function **pythoncp**. You can now change its code and configuration. To invoke your function with a test event, choose "Test".

Lambda > Functions > pythoncp

ARN - arn:aws:lambda:ap-south-1:310610247424:function:pythoncp

pythoncp

Throttle Qualifiers Actions python Test Save

✓ Execution result: succeeded (logs)

▼ Details

The area below shows the result returned by your function execution. [Learn more](#) about returning results from your function.

```
{
  "statusCode": 200,
  "body": "\"Hello from Lambda!\""
}
```

Summary

Code SHA-256	Request ID
LD0MjQ04TMa6oFyOz3Y3mJqsPxm9IEhtimXGaDlb8c=	6e0f4993-84fb-4a02-828b-068ff41801db
Duration	Billed duration
1.22 ms	100 ms
Resources configured	Max memory used
128 MB	52 MB Init Duration: 129.73 ms

Feedback English (US)

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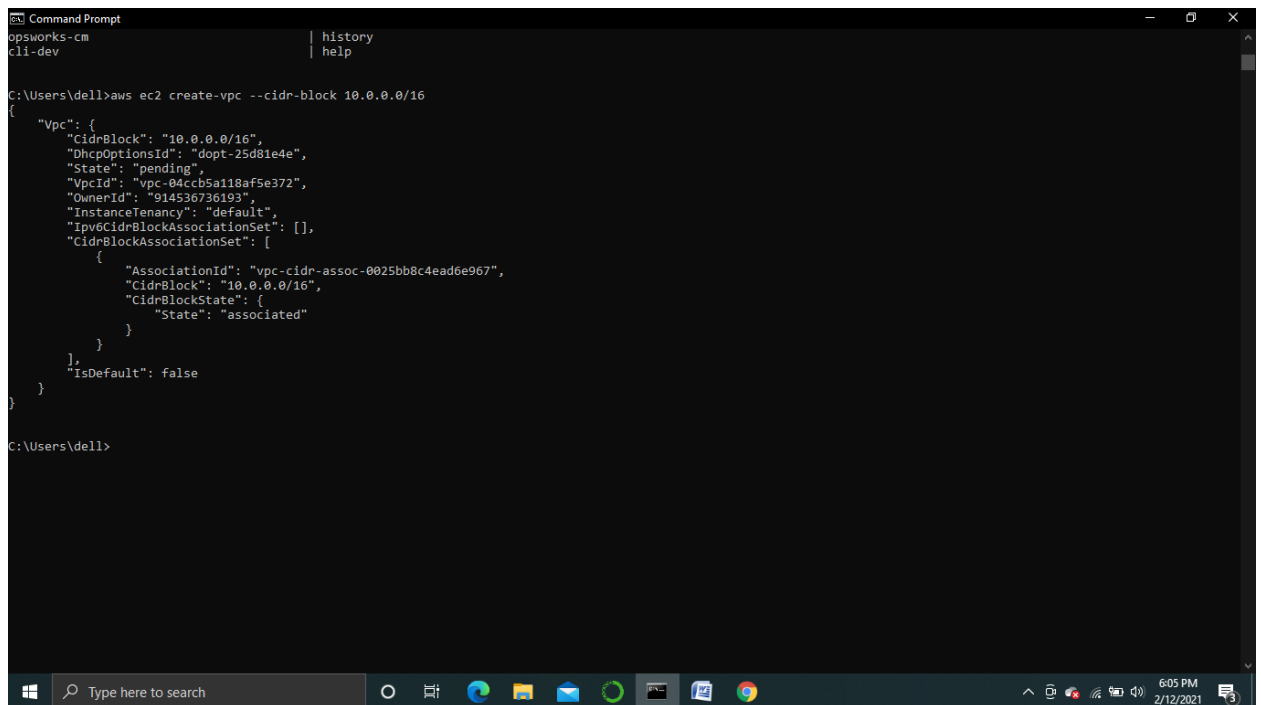
Type here to search

7:20 PM 8/14/2020

CONFIGURE SECURITY GROUPS THROUGH AWS CLI

STEPS TO FOLLOW:-

- Open the command prompt and type aws configure.
 - Give the access key id.
 - Select my security credentials from aws management console.
 - Get the access key
 - Click on new key
 - Copy the key and paste it in CLI
 - Mention the region name
 - AWS CLI is ready to take the commands.
-
- aws ec2 create-vpc --cidr-block 10.0.0.0/16.



```
Command Prompt
opsworks-cm | history
cli-dev | help

C:\Users\dell>aws ec2 create-vpc --cidr-block 10.0.0.0/16
{
  "Vpc": {
    "CidrBlock": "10.0.0.0/16",
    "DhcpOptionsId": "dopt-25d81e4e",
    "State": "pending",
    "VpcId": "vpc-04ccb5a118af5e372",
    "OwnerId": "914536736193",
    "InstanceTenancy": "default",
    "Ipv6CidrBlockAssociationSet": [],
    "CidrBlockAssociationSet": [
      {
        "AssociationId": "vpc-cidr-assoc-0025bb8c4ead6e967",
        "CidrBlock": "10.0.0.0/16",
        "CidrBlockState": {
          "State": "associated"
        }
      }
    ]
  },
  "IsDefault": false
}
```

To Create SG for VPC:-

- aws ec2 create-security-group --group-name my-sg1 --description "My security group1" --vpc-id vpc-0d0337664aaa0ab93

```
Command Prompt
"CidrBlockState": {
  "State": "associated"
}
},
"IsDefault": false
}
}

C:\Users\dell>aws ec2 create-security-group --group-name msg1 --description "My security group1" --vpc-id vpc-04ccb5a118af5e372
{
  "GroupId": "sg-0c2ad16b484021d3d"
}

C:\Users\dell>
```

To describe:-

➤ `aws ec2 describe-security-groups --group-ids sg-0711db3fd7d5f5173`

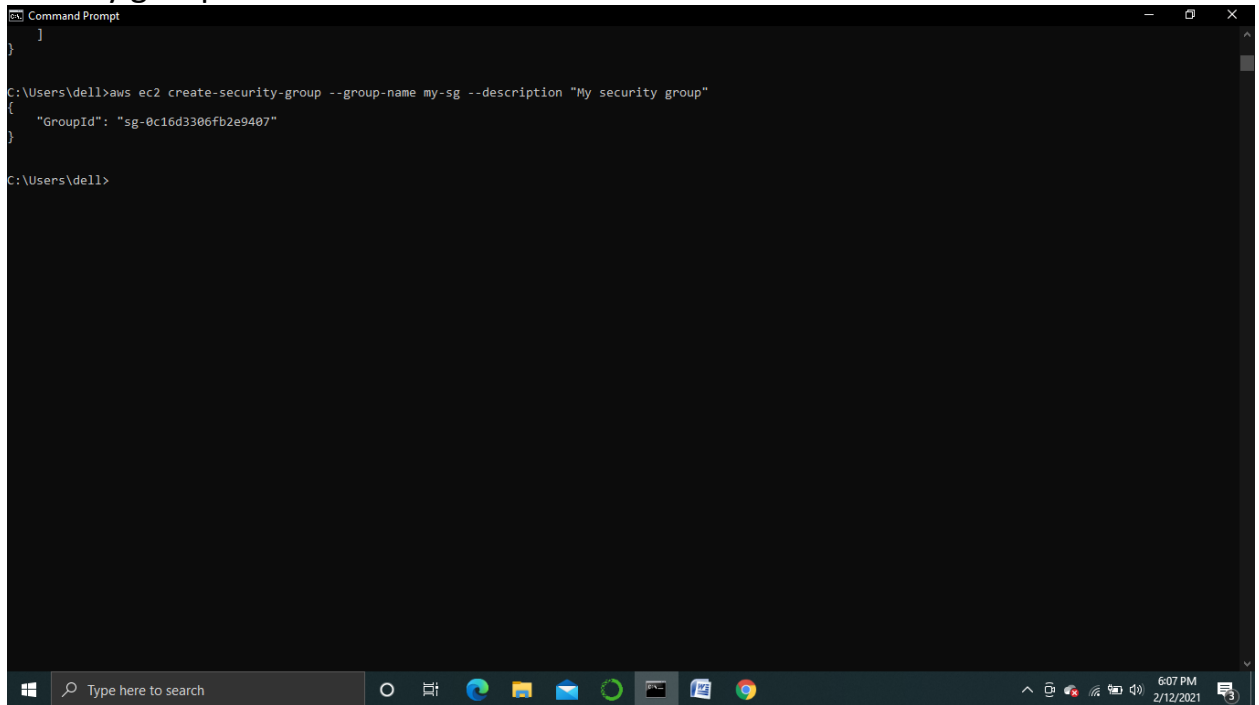
```
Command Prompt
C:\Users\dell>aws ec2 create-security-group --group-name msg1 --description "My security group1" --vpc-id vpc-04ccb5a118af5e372
{
  "GroupId": "sg-0c2ad16b484021d3d"
}

C:\Users\dell>aws ec2 describe-security-groups --group-id sg-0c2ad16b484021d3d
{
  "SecurityGroups": [
    {
      "Description": "My security group1",
      "GroupName": "msg1",
      "IpPermissions": [],
      "OwnerId": "914536736193",
      "GroupId": "sg-0c2ad16b484021d3d",
      "IpPermissionsEgress": [
        {
          "IpProtocol": "-1",
          "IpRanges": [
            {
              "CidrIp": "0.0.0.0/0"
            }
          ],
          "Ipv6Ranges": [],
          "PrefixListIds": [],
          "UserIdGroupPairs": []
        }
      ],
      "VpcId": "vpc-04ccb5a118af5e372"
    }
  ]
}

C:\Users\dell>
```

To create SG for EC2:-

- `aws ec2 create-security-group --group-name my-sg12 --description "My security group12"`



```
Command Prompt
]

C:\Users\dell>aws ec2 create-security-group --group-name my-sg --description "My security group"
{
  "GroupId": "sg-0c16d3306fb2e9407"
}

C:\Users\dell>
```

To describe :-

- `aws ec2 describe-security-groups --group-names my-sg`

```
Command Prompt
"GroupId": "sg-0c16d3306fb2e9407"
}

C:\Users\dell>aws ec2 describe-security-groups --group-names my-sg
{
  "SecurityGroups": [
    {
      "Description": "My security group",
      "GroupName": "my-sg",
      "IpPermissions": [],
      "OwnerId": "914536736193",
      "GroupId": "sg-0c16d3306fb2e9407",
      "IpPermissionsEgress": [
        {
          "IpProtocol": "-1",
          "IpRanges": [
            {
              "CidrIp": "0.0.0.0/0"
            }
          ],
          "Ipv6Ranges": [],
          "PrefixListIds": [],
          "UserIdGroupPairs": []
        }
      ],
      "VpcId": "vpc-f2667d9a"
    }
  ]
}

C:\Users\dell>
C:\Users\dell>
```

To delete the security group:-

- `aws ec2 delete-security-group --group-id sg-0c16d3306fb2e9407`

```
Command Prompt

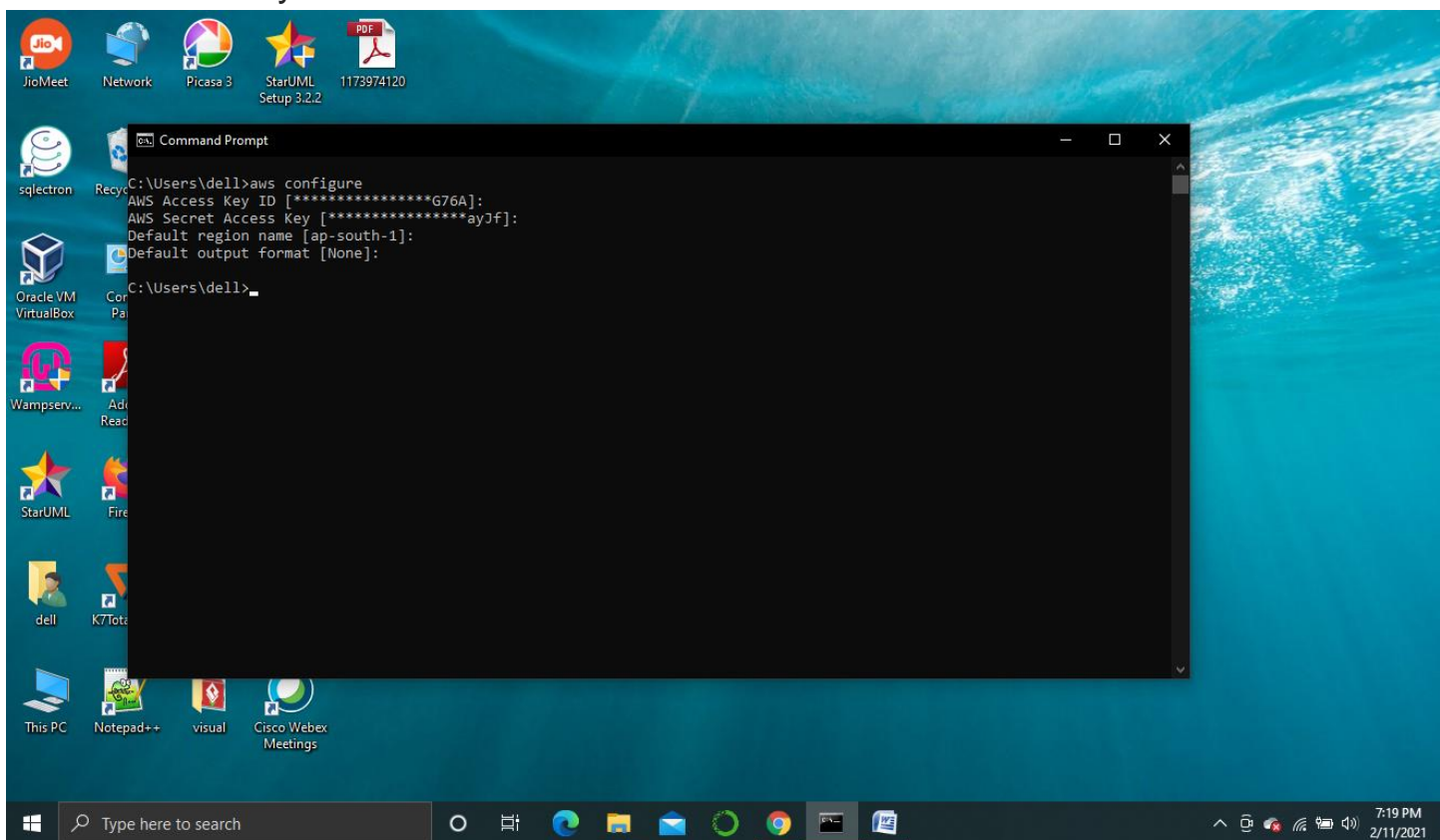
C:\Users\dell>aws ec2 delete-security-group --group-id sg-0c16d3306fb2e9407

C:\Users\dell>
```


CONFIGURE VPC THROUGH AWS CLI

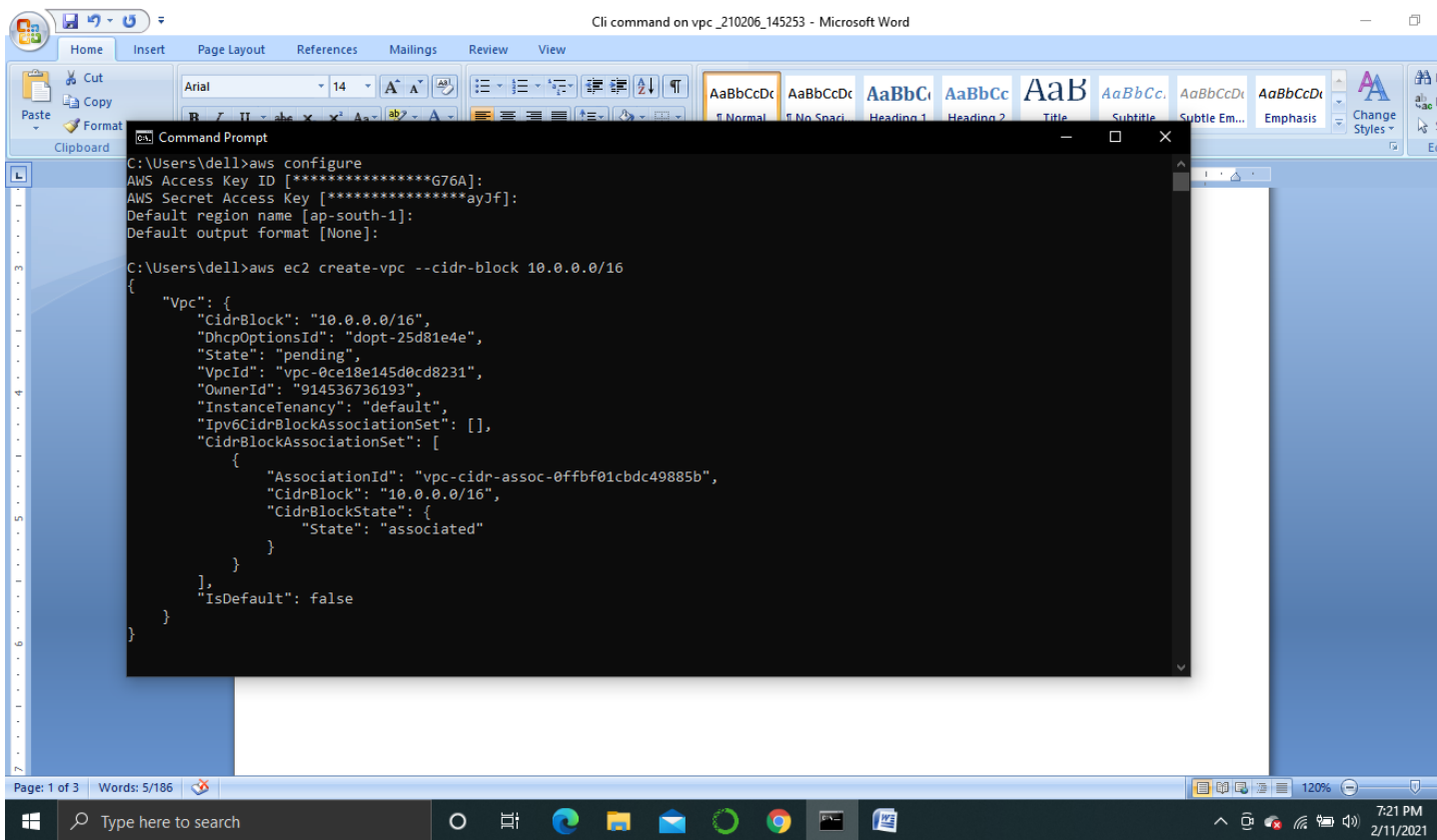
STEPS TO FOLLOW:-

- Open the command prompt and type aws configure.
- Give the access key id.
- Select my security credentials from aws management console.
- Get the access key
- Click on new key
- Copy the key and paste it in CLI
- Mention the region name
- AWS CLI is ready to take the commands.



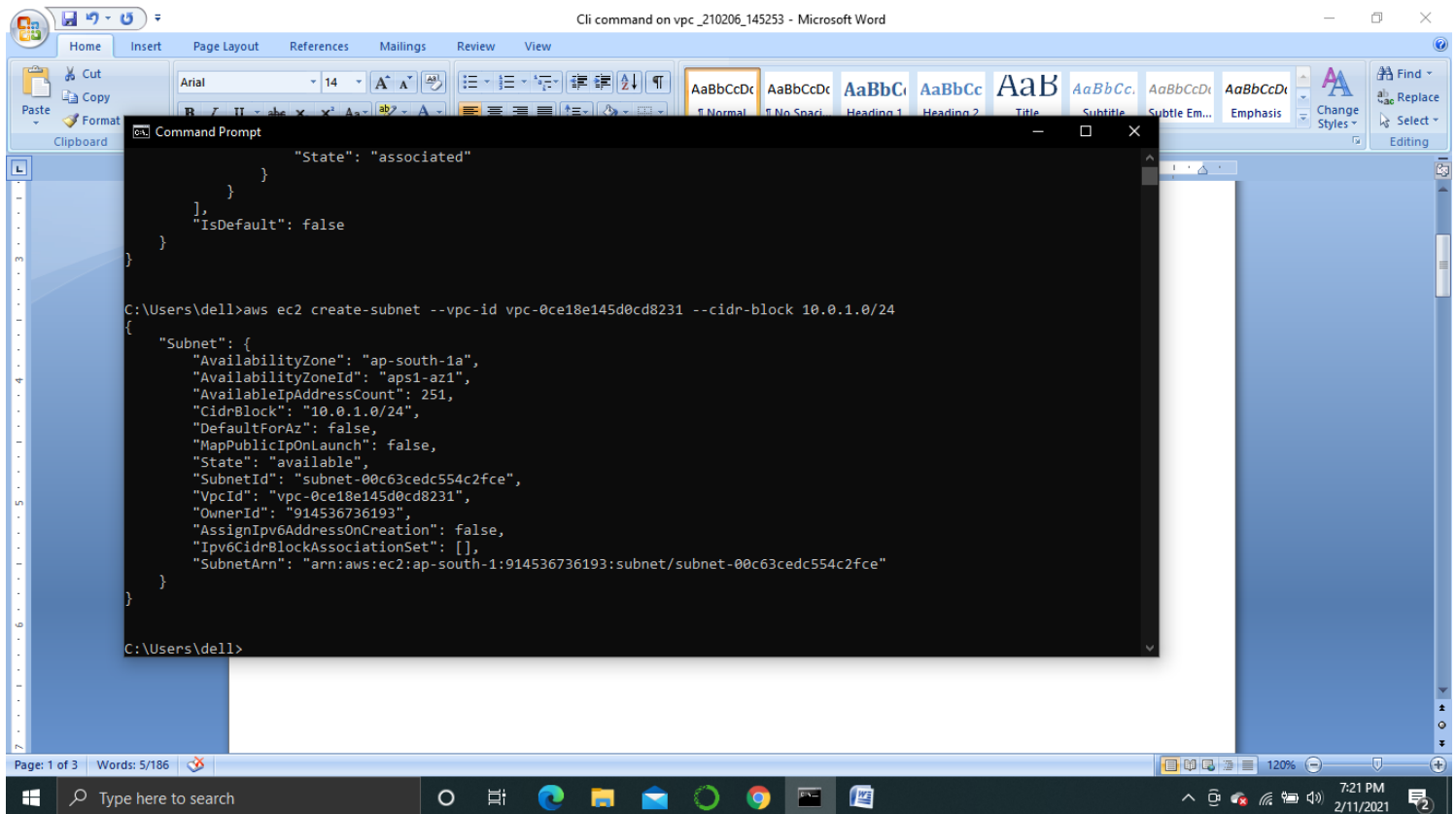
To Create VPC:-

- `aws ec2 create-vpc --cidr-block 10.0.0.0/16`



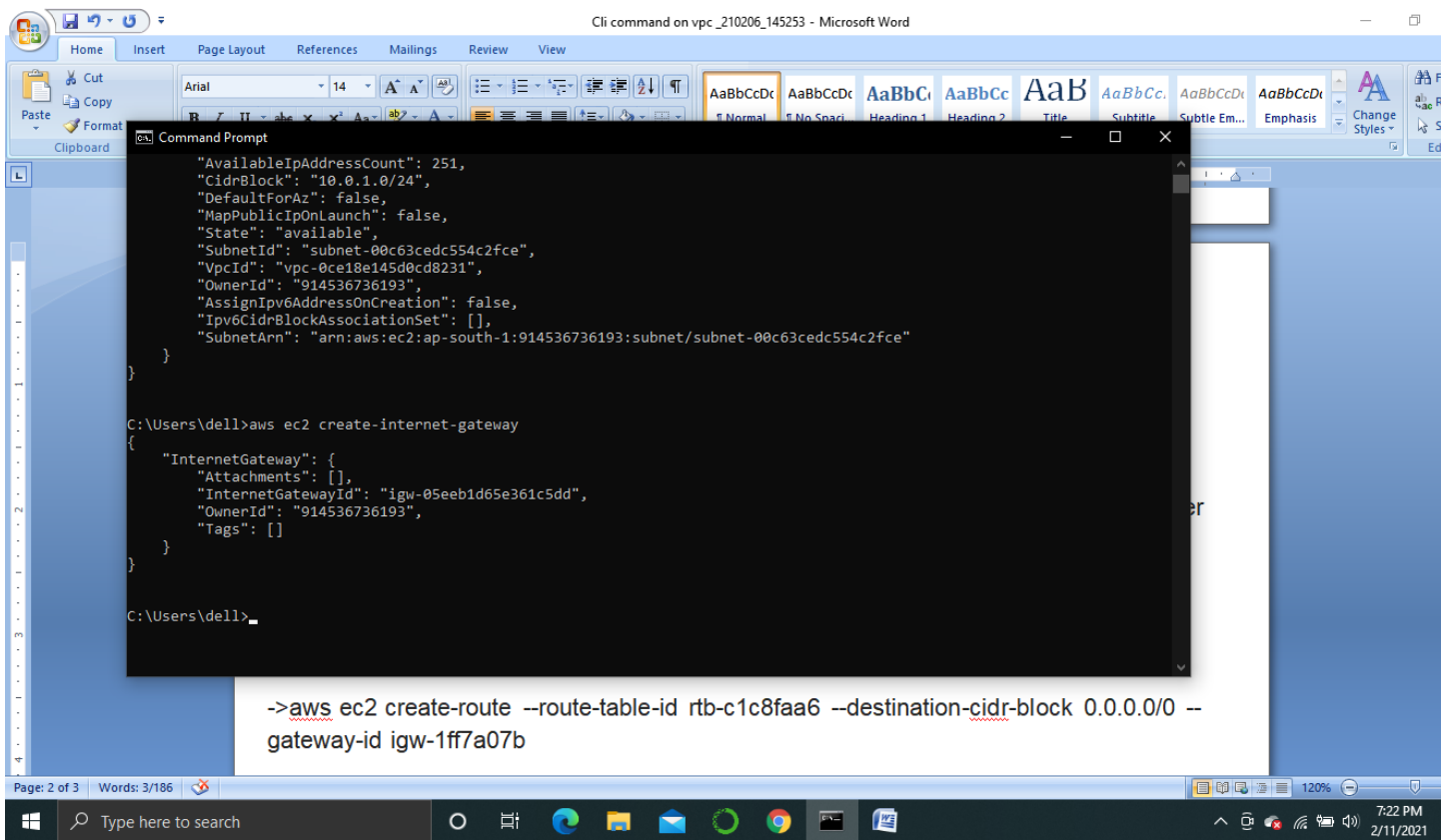
To create Subnet:-

➤ `aws ec2 create-subnet --vpc-id vpc-2f09a348 --cidr-block 10.0.1.0/24`(
vpc id is created earlier)



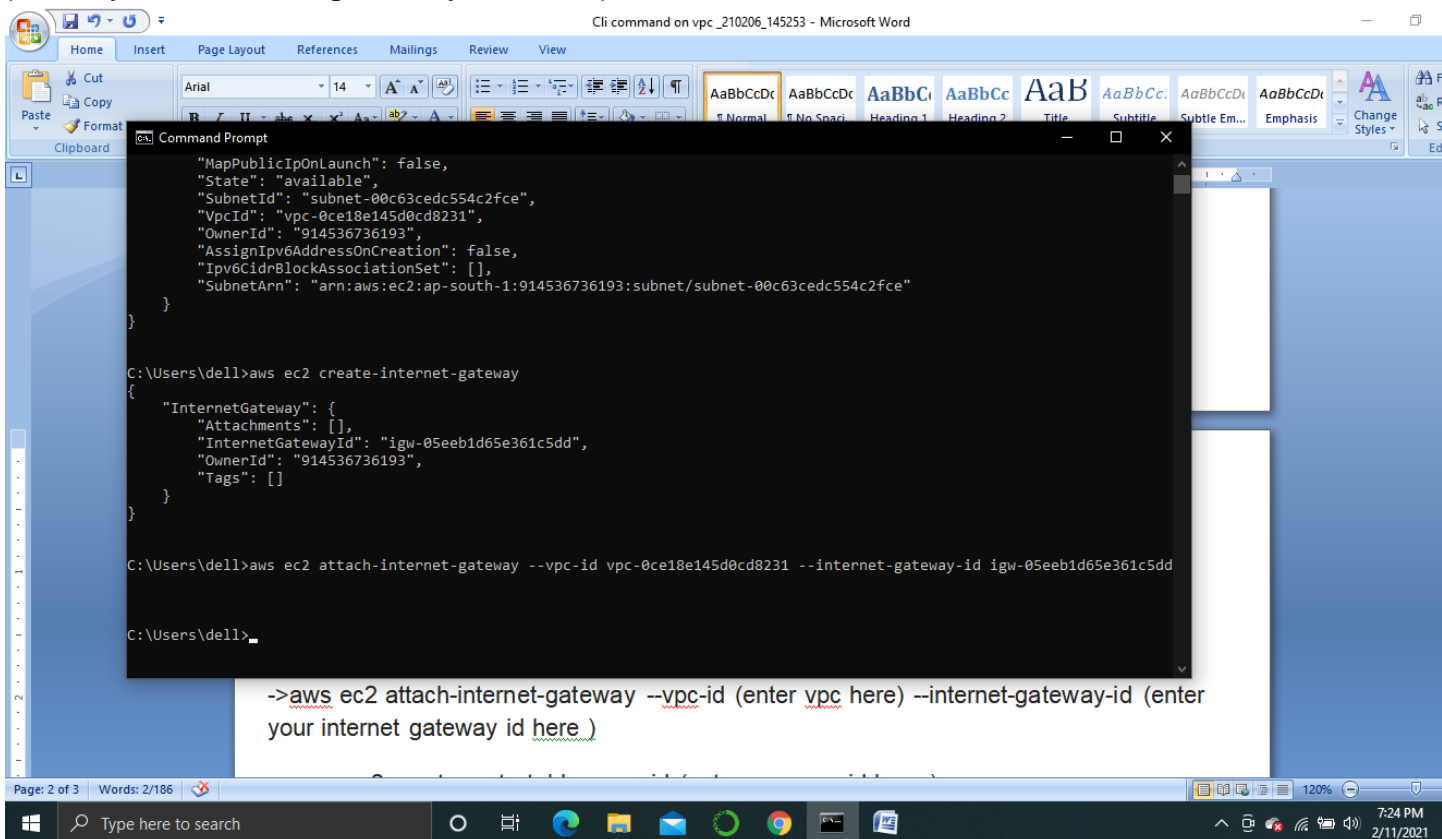
To create internet gateway:-

➤ `aws ec2 create-internet-gateway`



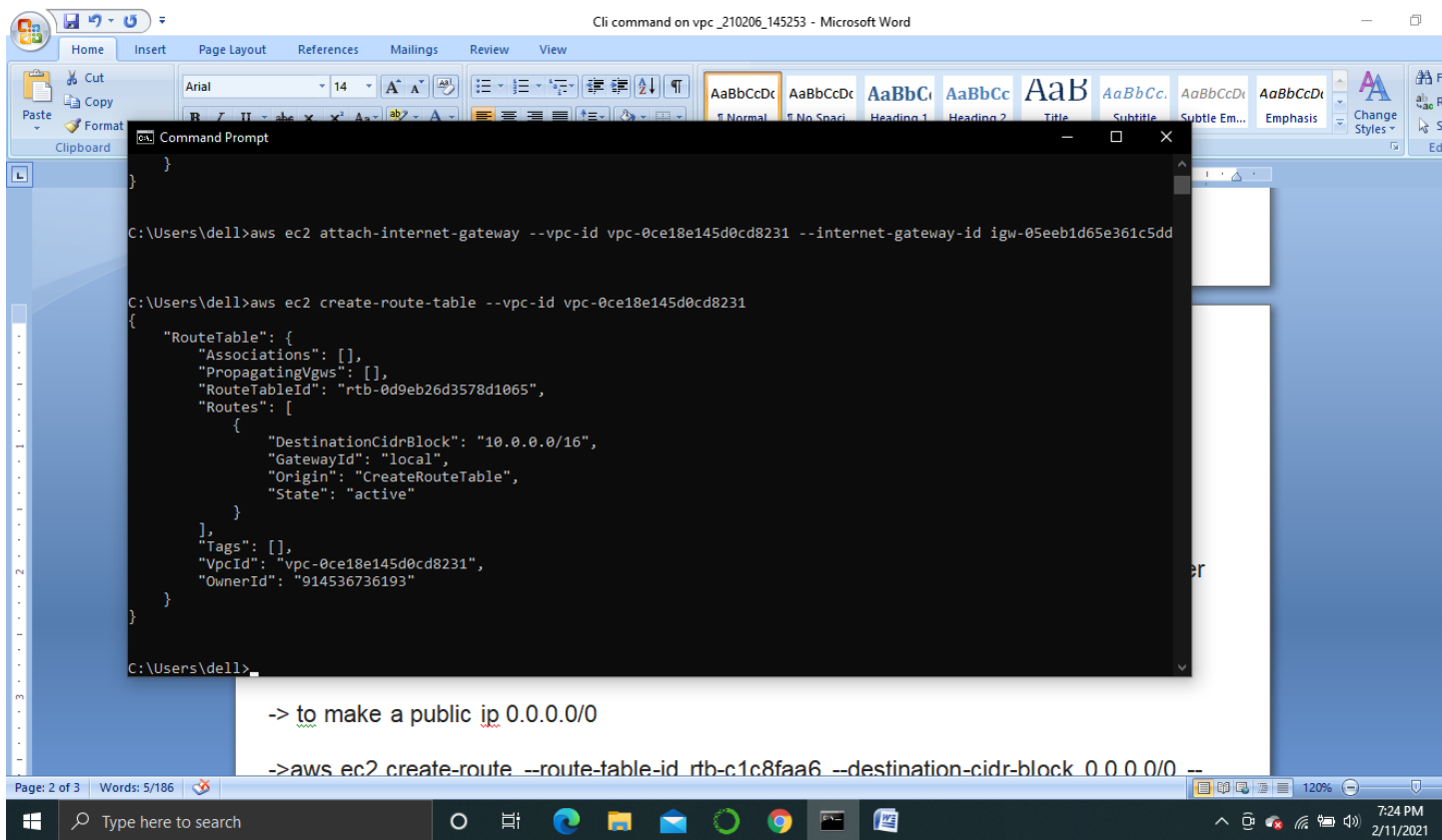
To attach the internet gateway:-

- aws ec2 attach-internet-gateway --vpc-id (enter vpc here) --internet-gateway-id (enter your internet gateway id here)



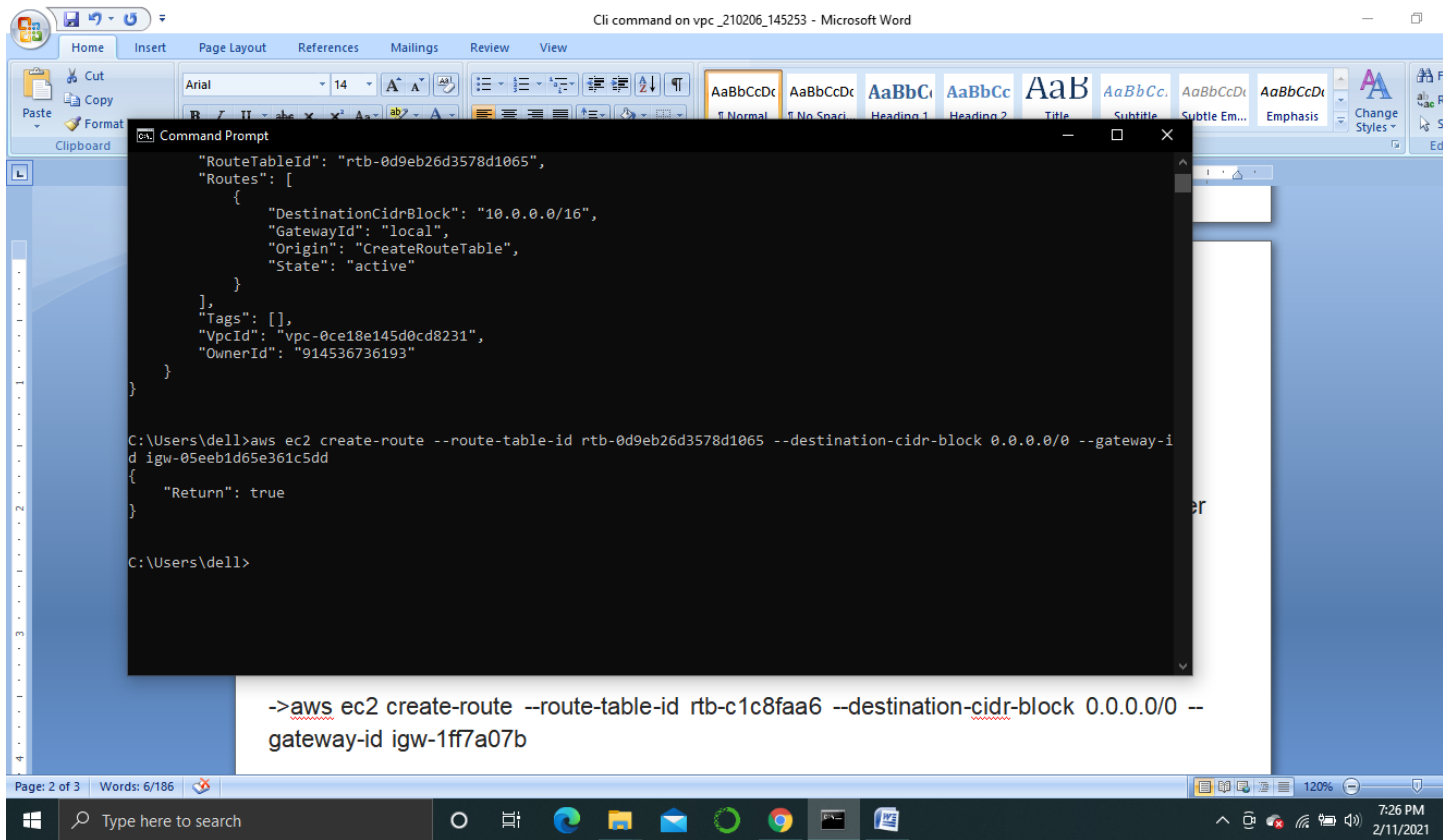
To create a route table:-

- aws ec2 create-route-table --vpc-id (enter your vpc id here)



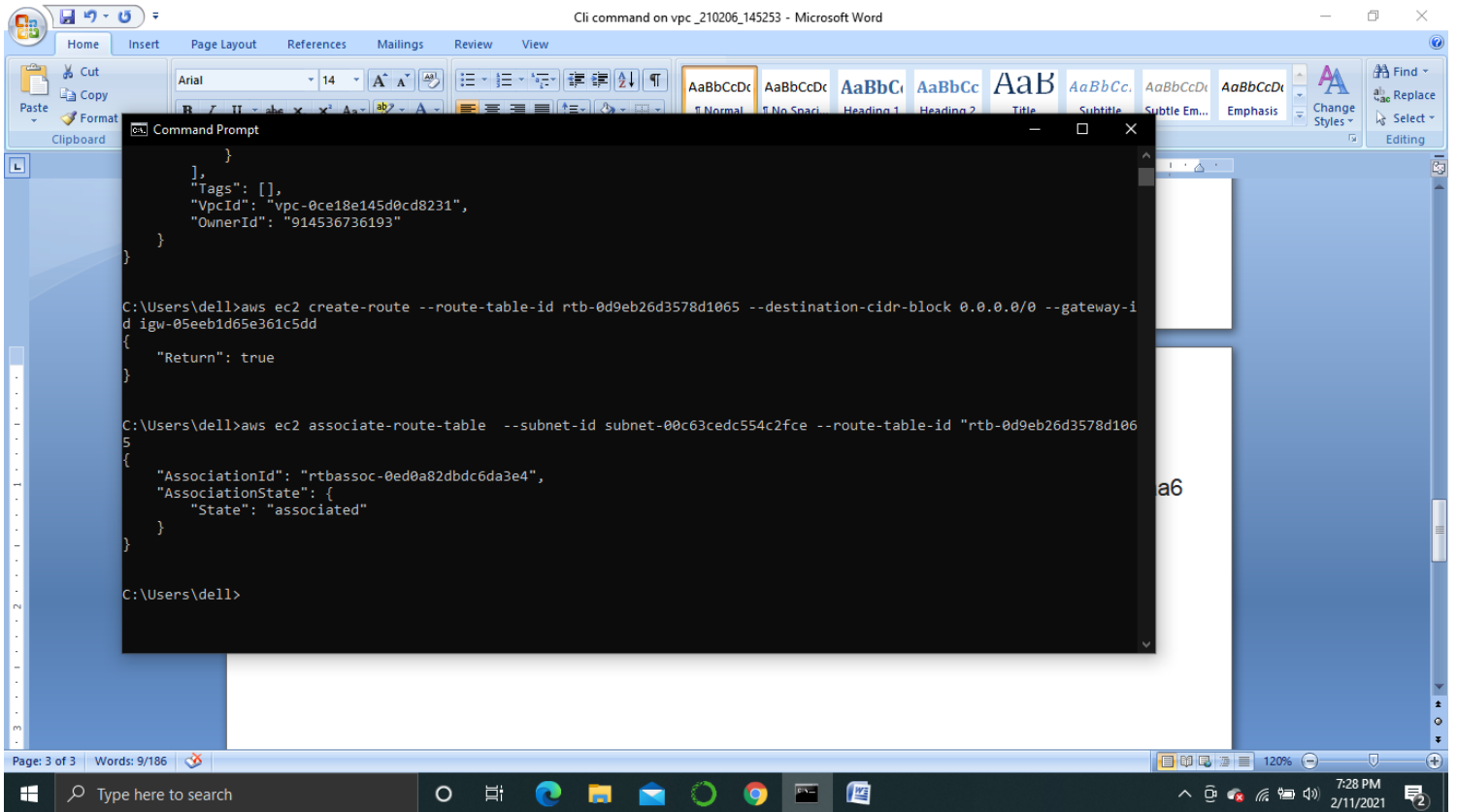
To make the Route table public:-

- `aws ec2 create-route --route-table-id rtb-c1c8faa6 --destination-cidr-block 0.0.0.0/0 -gateway-id igw-1ff7a07b`



To associate route table with subnet:-

- `aws ec2 associate-route-table --subnet-id subnet-b46032ec --route-table-id rtb-c1c8faa6`



```

    },
    "Tags": [],
    "VpcId": "vpc-0ce18e145d0cd8231",
    "OwnerId": "914536736193"
  }
}

C:\Users\dell>aws ec2 create-route --route-table-id rtb-0d9eb26d3578d1065 --destination-cidr-block 0.0.0.0/0 --gateway-id igw-05eeb1d65e361c5dd
{
  "Return": true
}

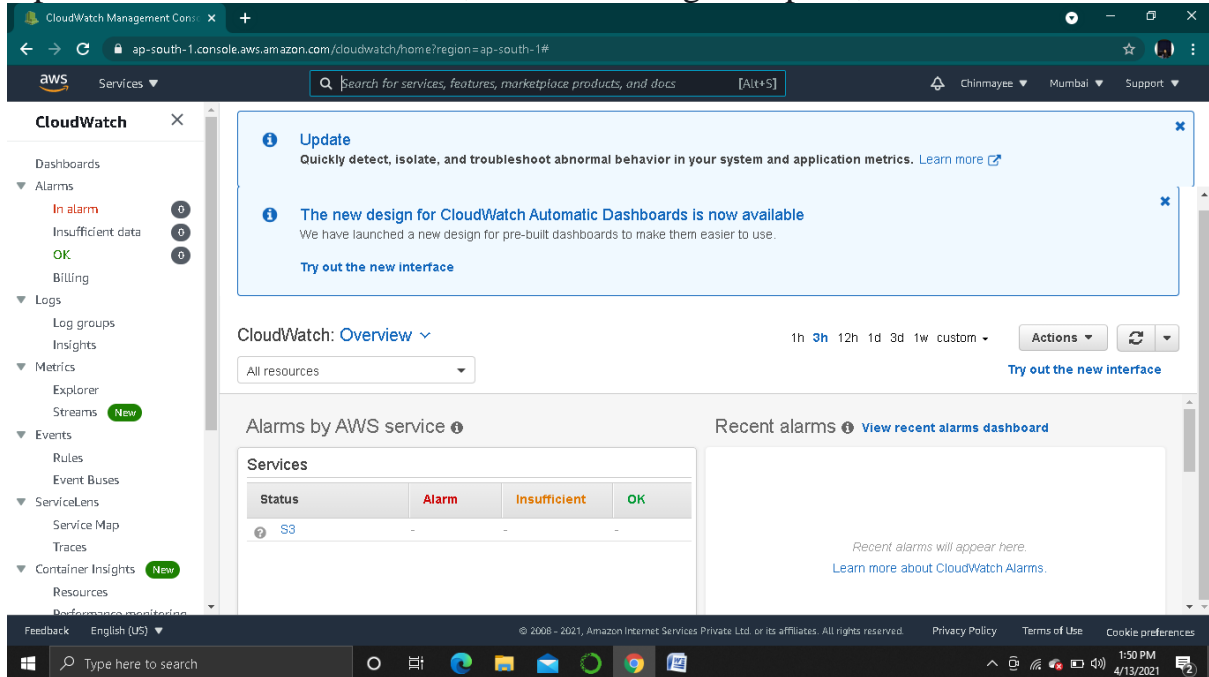
C:\Users\dell>aws ec2 associate-route-table --subnet-id subnet-00c63cedc554c2fce --route-table-id "rtb-0d9eb26d3578d1065"
{
  "AssociationId": "rtbassoc-0ed0a82dbdc6da3e4",
  "AssociationState": {
    "State": "associated"
  }
}

C:\Users\dell>
```

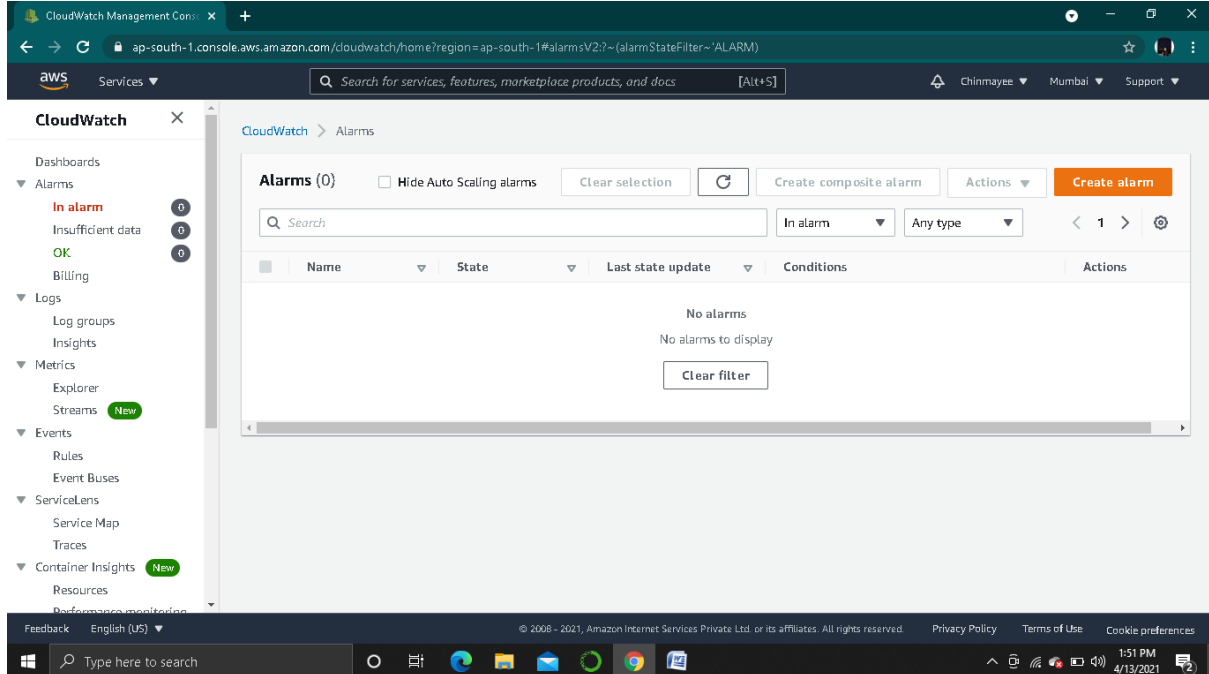
CREATE AN ALARM USING CLOUDWATCH

STEPS TO BE FOLLOWED:

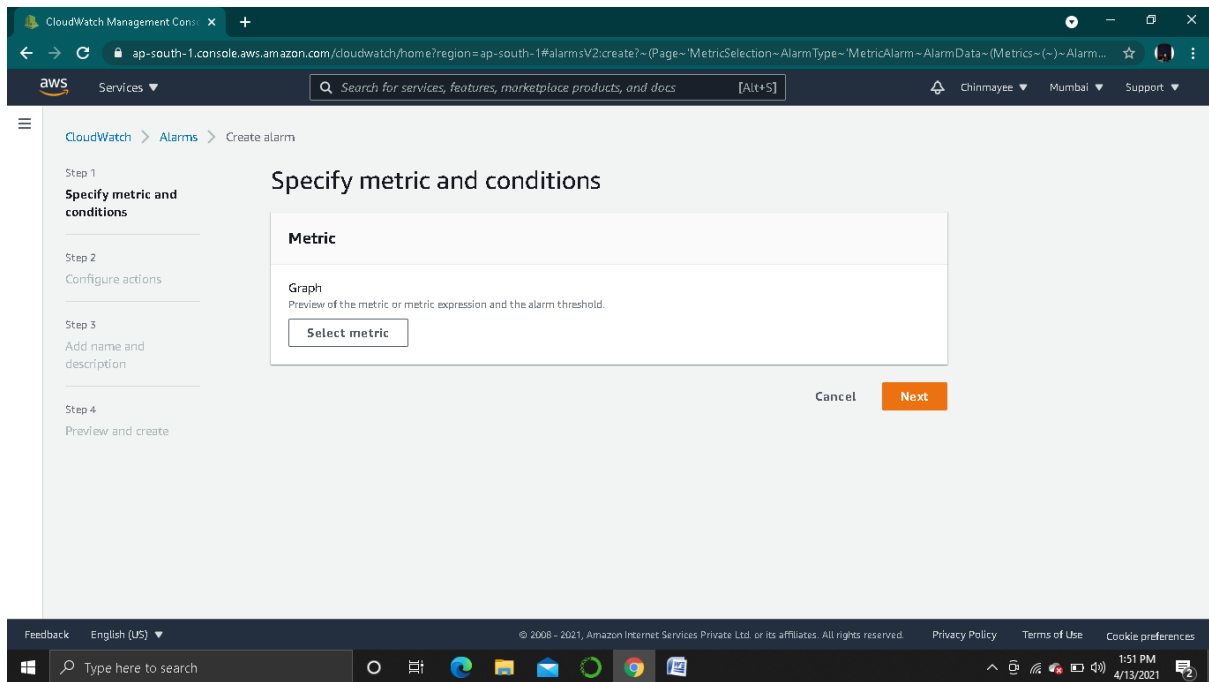
1. Open the CloudWatch console, from the navigation pane, choose Alarms.



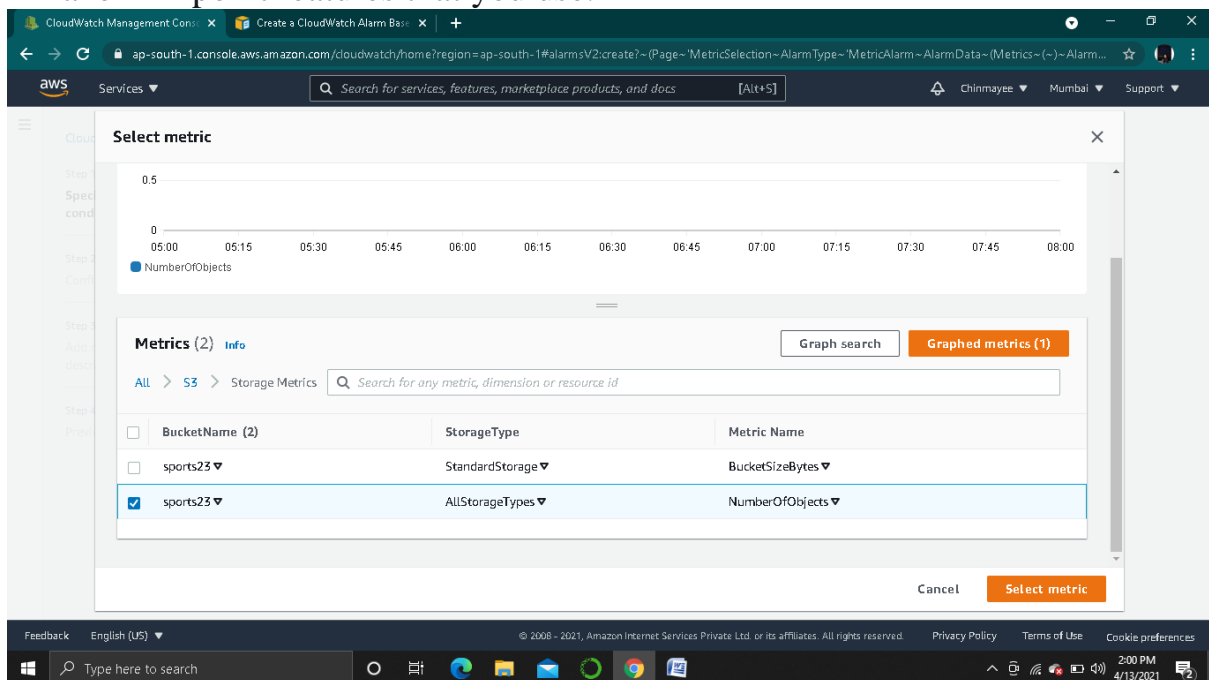
2. Choose Create alarm.



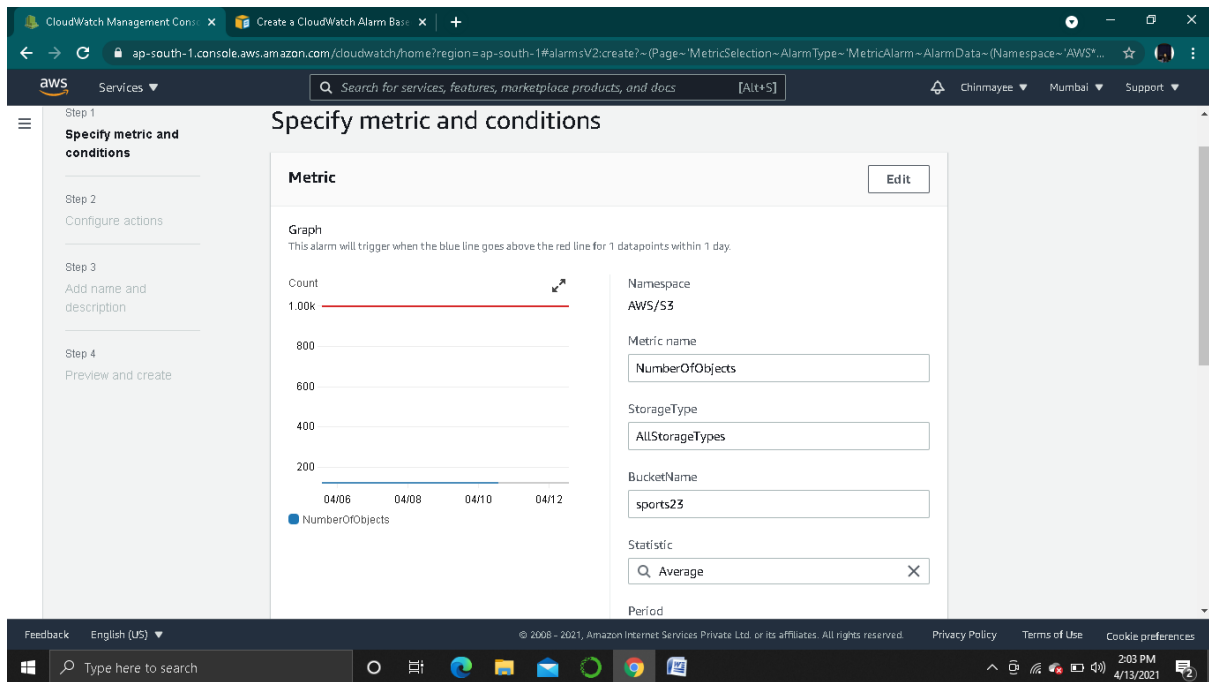
3. Choose Select metric.



4. On the All metrics tab, choose Pinpoint, and then choose the type of metric that you want to create an alarm for. The types of available metrics depends on the Amazon Pinpoint features that you use.



5. Select the metric that you want to create an alarm for, and then choose Select metric. The Specify metric and conditions page appears, showing a graph and other information about the metric.



6. Under Conditions, complete the following steps:

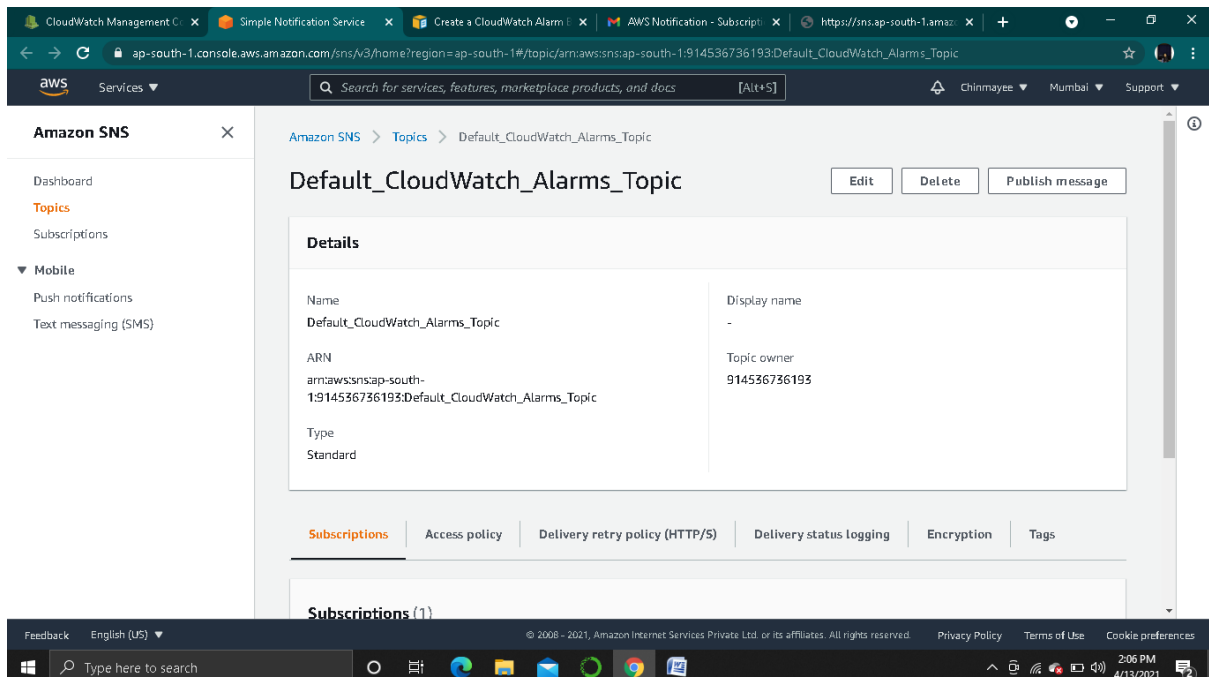
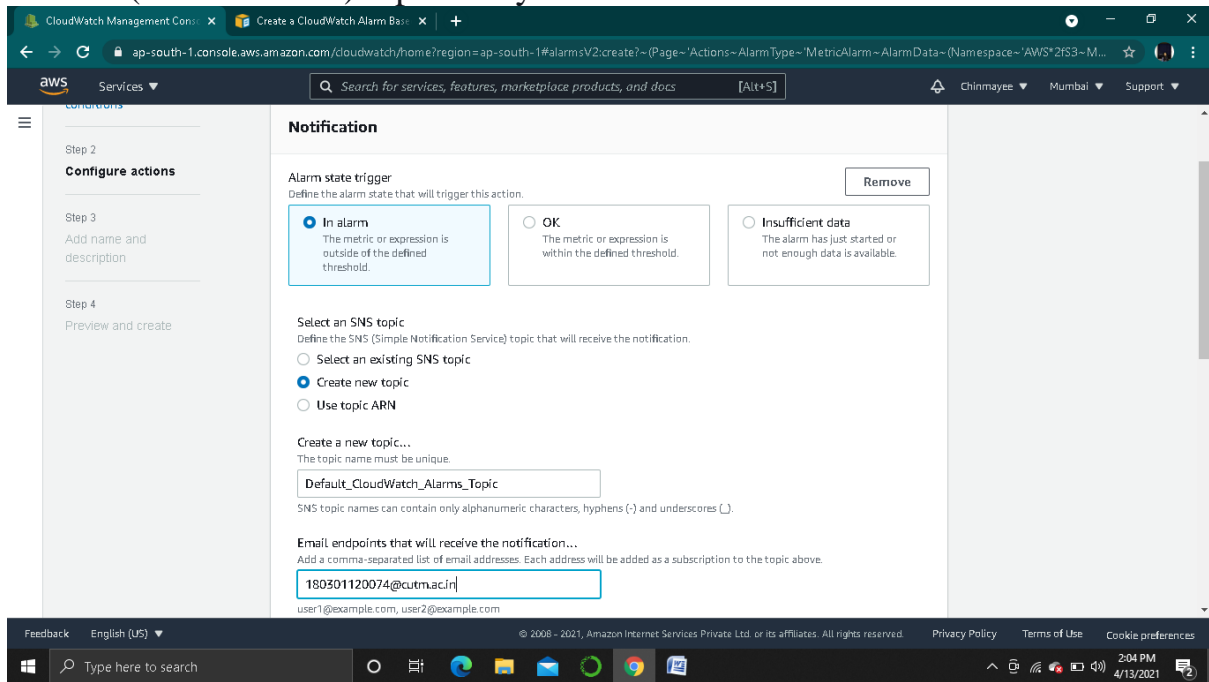
- For Threshold type, choose Static.
- For Whenever metric is, specify whether you want the value of the metric to be greater than, greater than or equal to, less than, or less than or equal to the threshold to trigger the alarm. Then, under than, enter the threshold value that you want to trigger the alarm.

The screenshot shows the 'Conditions' step in the AWS CloudWatch console. The 'Threshold type' section has 'Static' selected. The 'Whenever NumberofObjects is...' section has 'Greater' selected. The 'than...' section has a text input field containing '1000'. At the bottom, there are 'Cancel' and 'Next' buttons. The sidebar on the left is the same as in the previous screenshot.

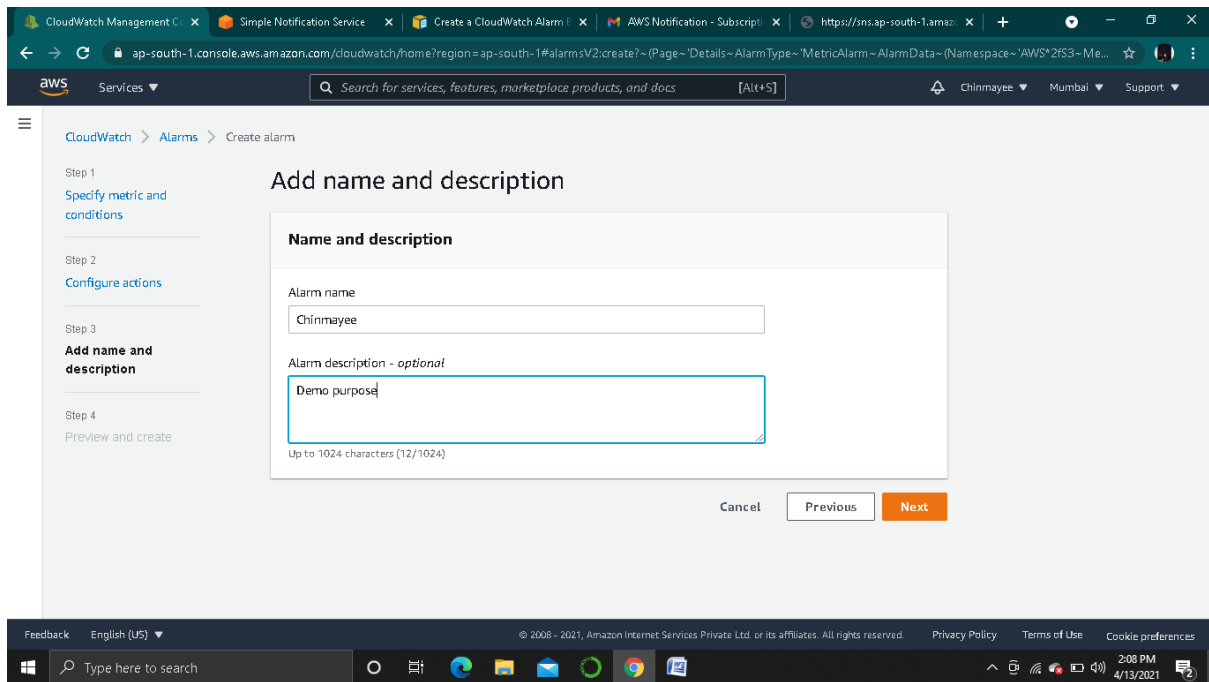
7. Under Additional configuration, complete the following steps:

- For Datapoints to alarm, enter the number of evaluation periods (datapoints) during which the metric value must meet the threshold conditions to trigger the alarm.

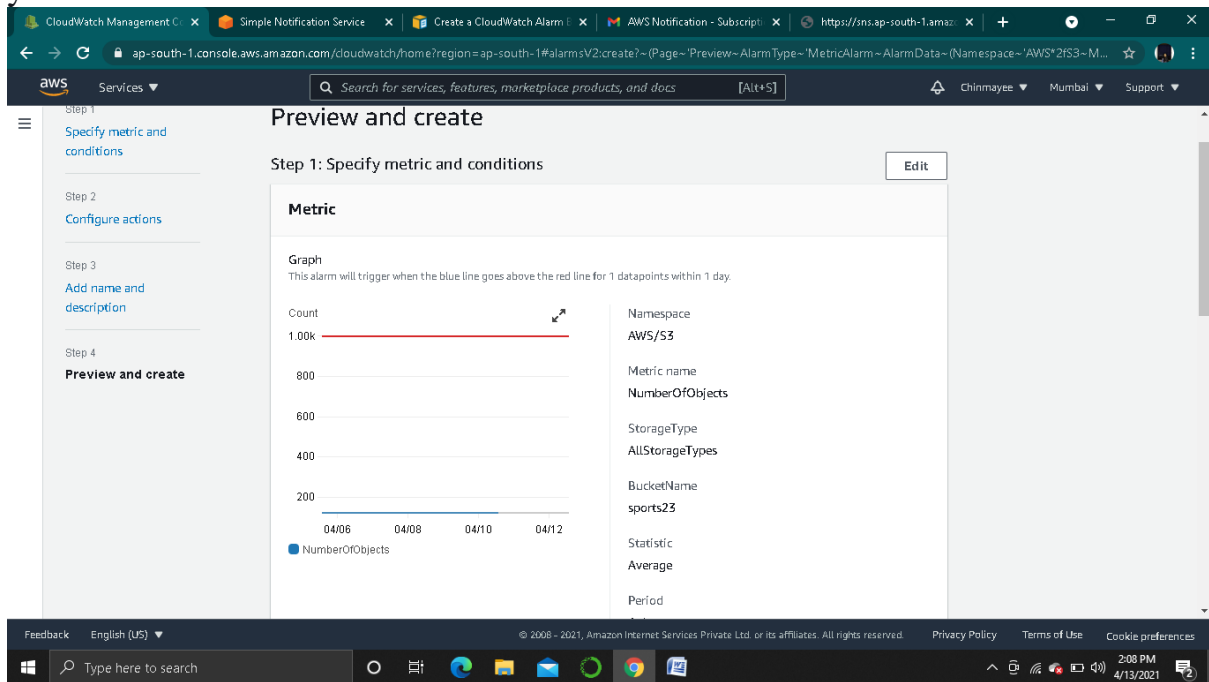
- For Missing data treatment, choose what you want the alarm to do if some data is missing.
- 8. Choose Next.
- 9. Under Notification, complete the following steps:
 - For Whenever this alarm state is, choose in Alarm.
 - For Select an SNS topic, choose or create an Amazon Simple Notification Service (Amazon SNS) topic that you want the alarm notification to be sent to.



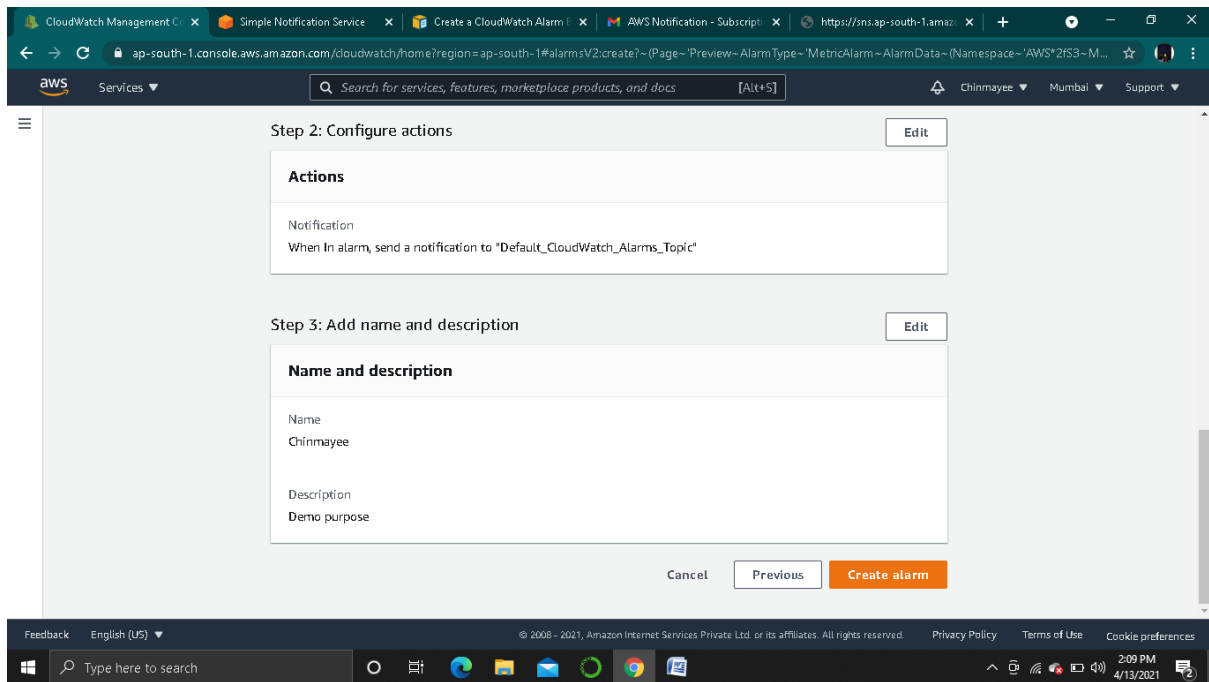
- 10. Choose Next.
- 11. Enter a name and, optionally, a description for the alarm, and then choose Next.



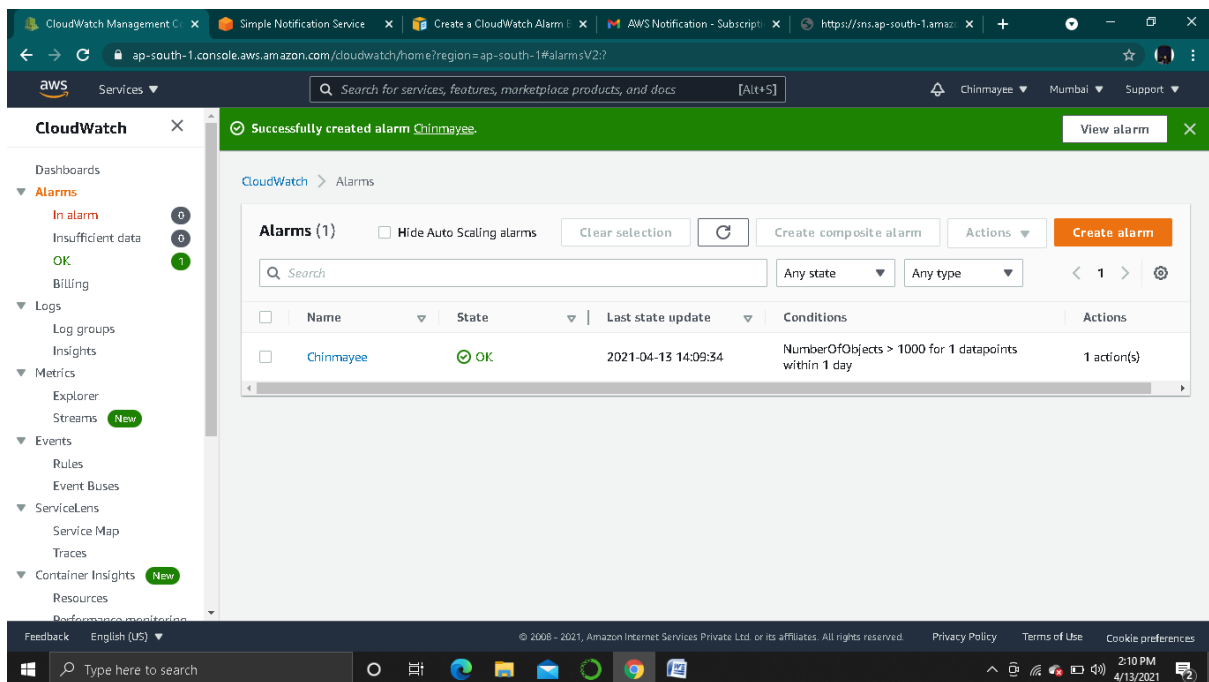
12. Under Preview and create, review and confirm that the alarm settings are what you want.



13. Choose create alarm.



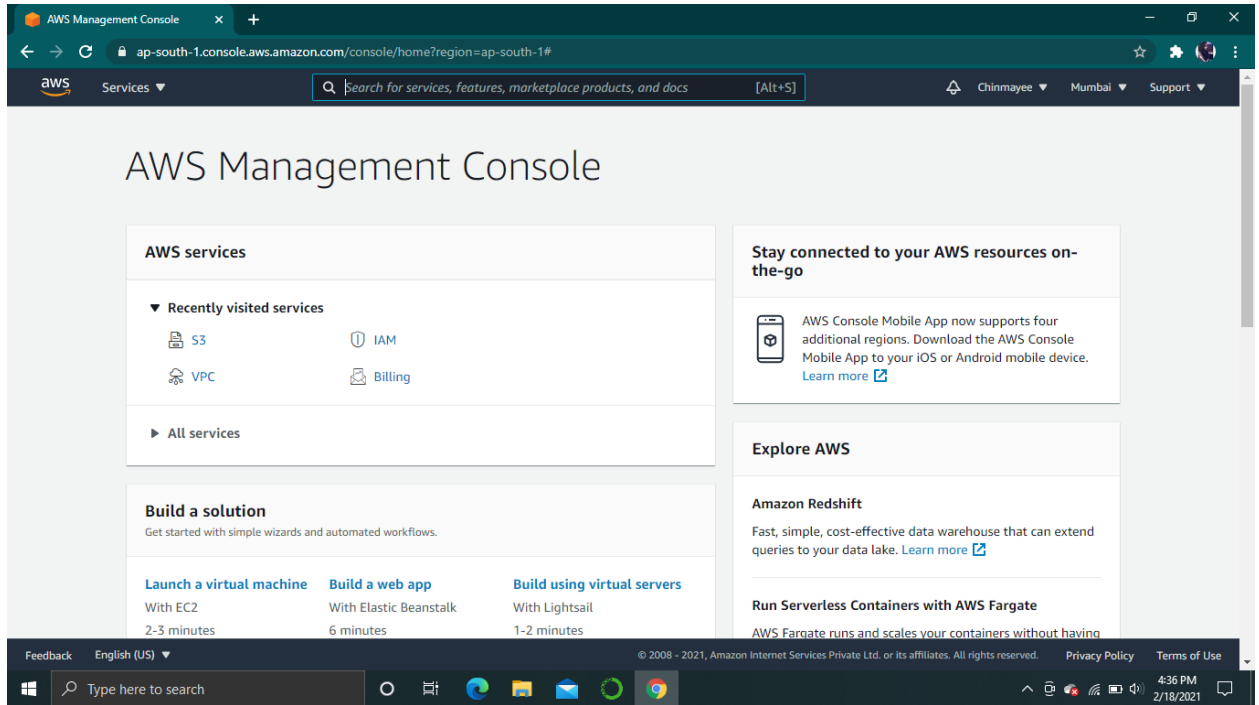
14. Review the status of the cloudwatch alarm.



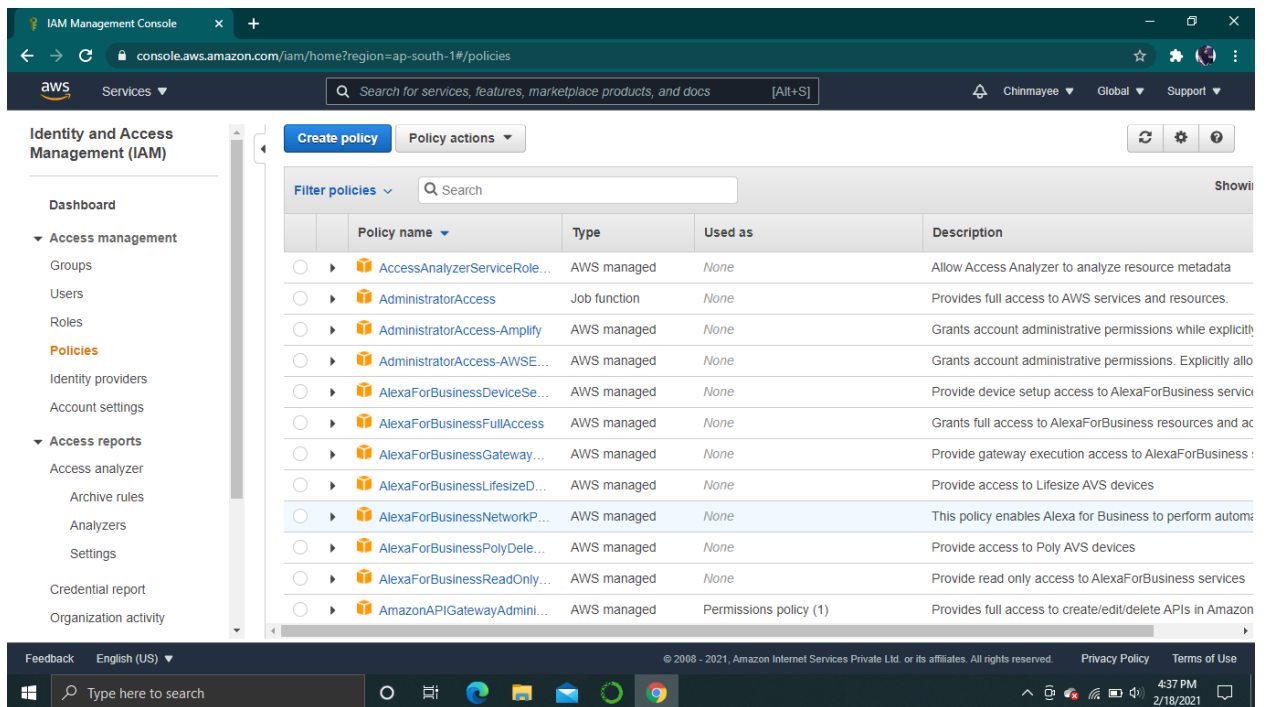
CREATE AN IAM POLICY AND ASSOCIATE A ROLE TO IT AND CONNECT IT USING EC2 INSTANCE

STEPS TO FOLLOW:-

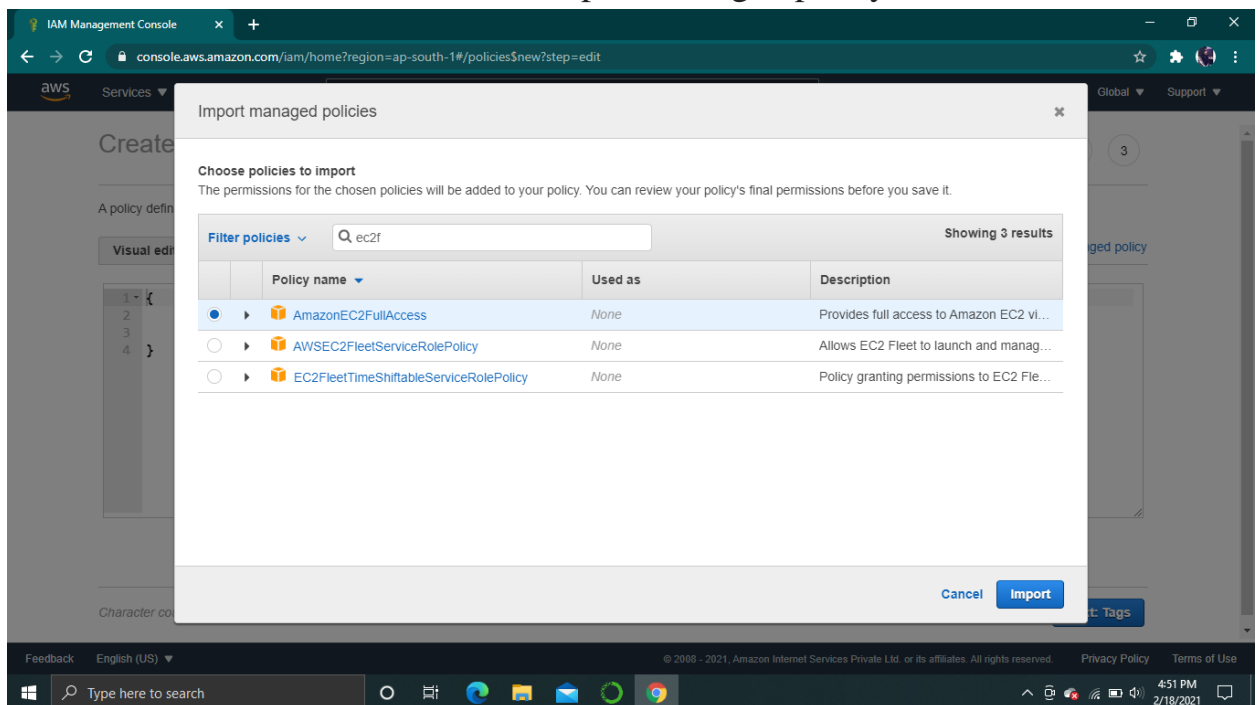
- Sign in to the AWS Management Console and open the IAM service.



- Choose Policies, and then choose Create Policy.



- Select the JSON format and choose import managed policy.



- Select AmazonEC2FullAccess and import it.

The screenshot shows the 'Create policy' page in the AWS IAM Management Console, specifically the 'JSON' editor step. The page has three numbered steps: 1 (selected), 2, and 3. A description states: 'A policy defines the AWS permissions that you can assign to a user, group, or role. You can create and edit a policy in the visual editor and using JSON. [Learn more](#)'. Below this are tabs for 'Visual editor' and 'JSON', with a link to 'Import managed policy'. The JSON editor contains the following code:

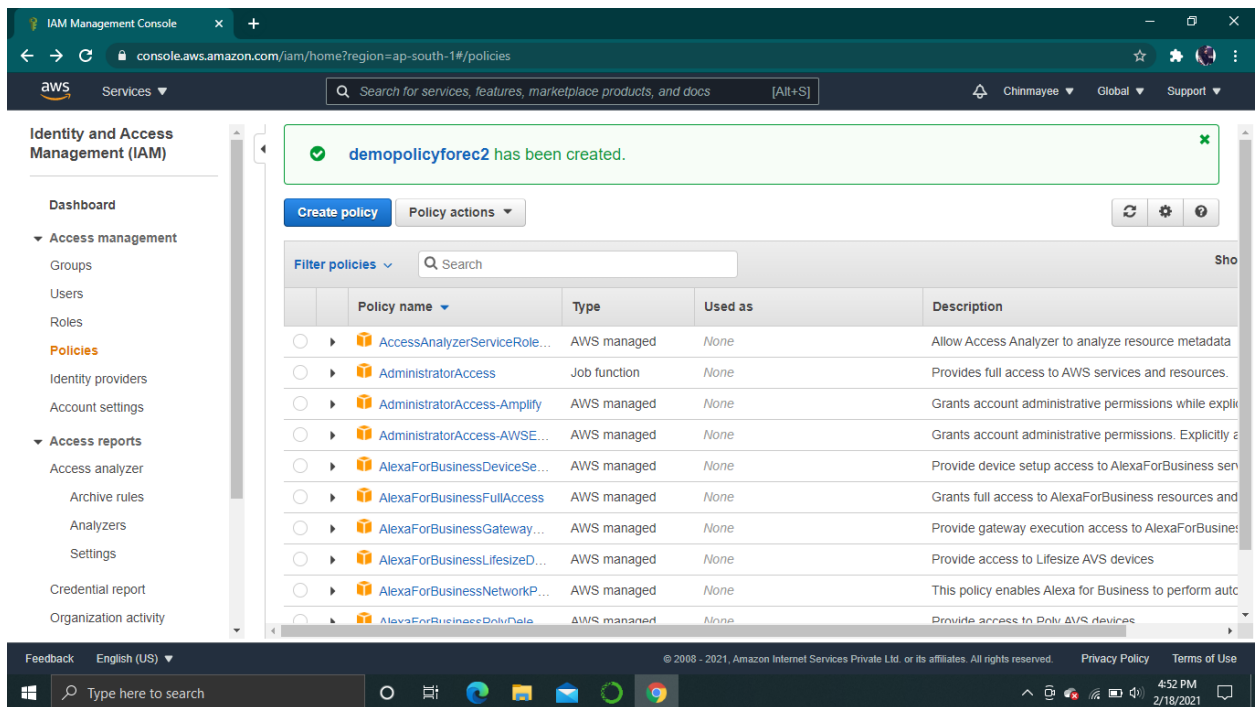
```
1 {
2   "Version": "2012-10-17",
3   "Statement": [
4     {
5       "Action": "ec2:*",
6       "Effect": "Allow",
7       "Resource": "*"
8     },
9     {
10      "Effect": "Allow",
11      "Action": "elasticloadbalancing:*",
12      "Resource": "*"
13    }
14  ]
15 }
```

At the bottom, it shows 'Character count: 573 of 6,144.' and buttons for 'Cancel' and 'Next: Tags'.

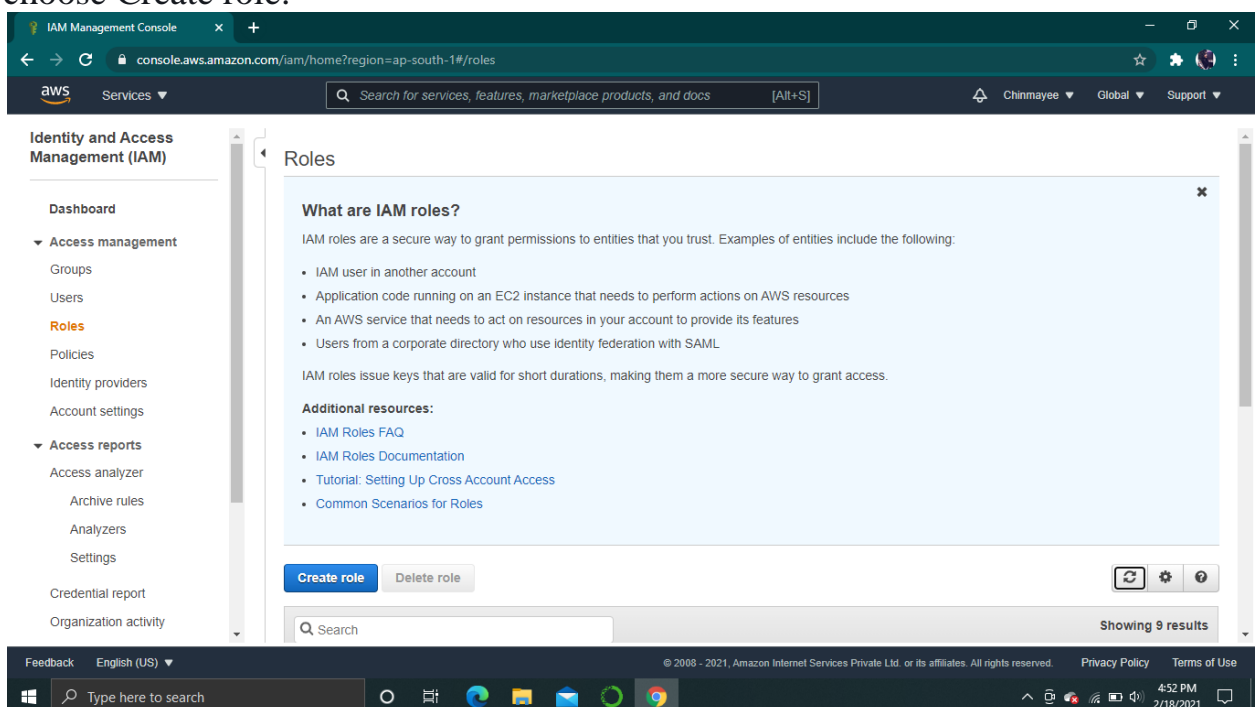
- Choose Next and define the policy with all its description and then select next.

The screenshot shows the 'Create policy' page in the AWS IAM Management Console, specifically the 'Review' step. The page has three numbered steps: 1, 2, and 3 (selected). The title is 'Review policy'. There is a 'Name*' field with the value 'demopolicyforec2' and a note: 'Use alphanumeric and '+=, @, _' characters. Maximum 128 characters.' Below this is a 'Description' text area with a note: 'Maximum 1000 characters. Use alphanumeric and '+=, @, _' characters.' At the bottom, there is a 'Summary' section with a '< Back' link and 'EC2'. It includes a 'Filter' input and a table with columns 'Action (437 of 437)', 'Resource', and 'Request condition'. The table shows 'List (123 of 123 actions)' and 'DescribeAccountAttributes' under the 'Action' column, 'All resources' under the 'Resource' column, and 'None' under the 'Request condition' column.

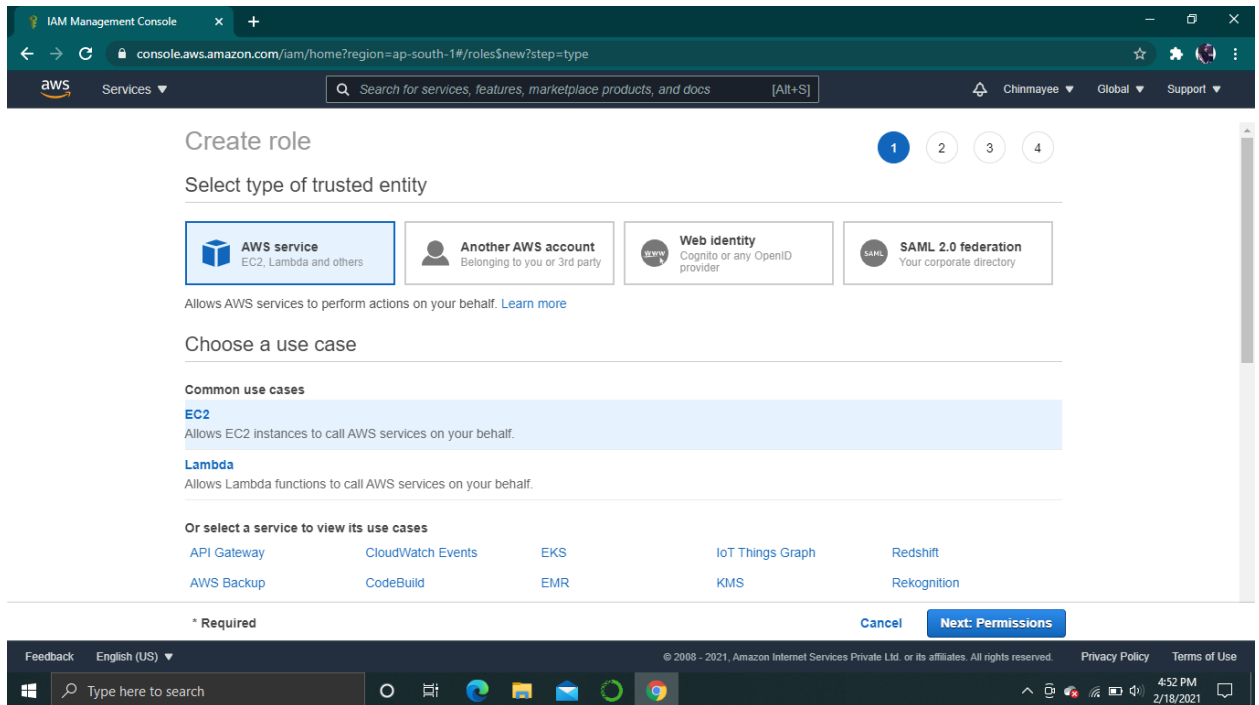
- The policy has been created.



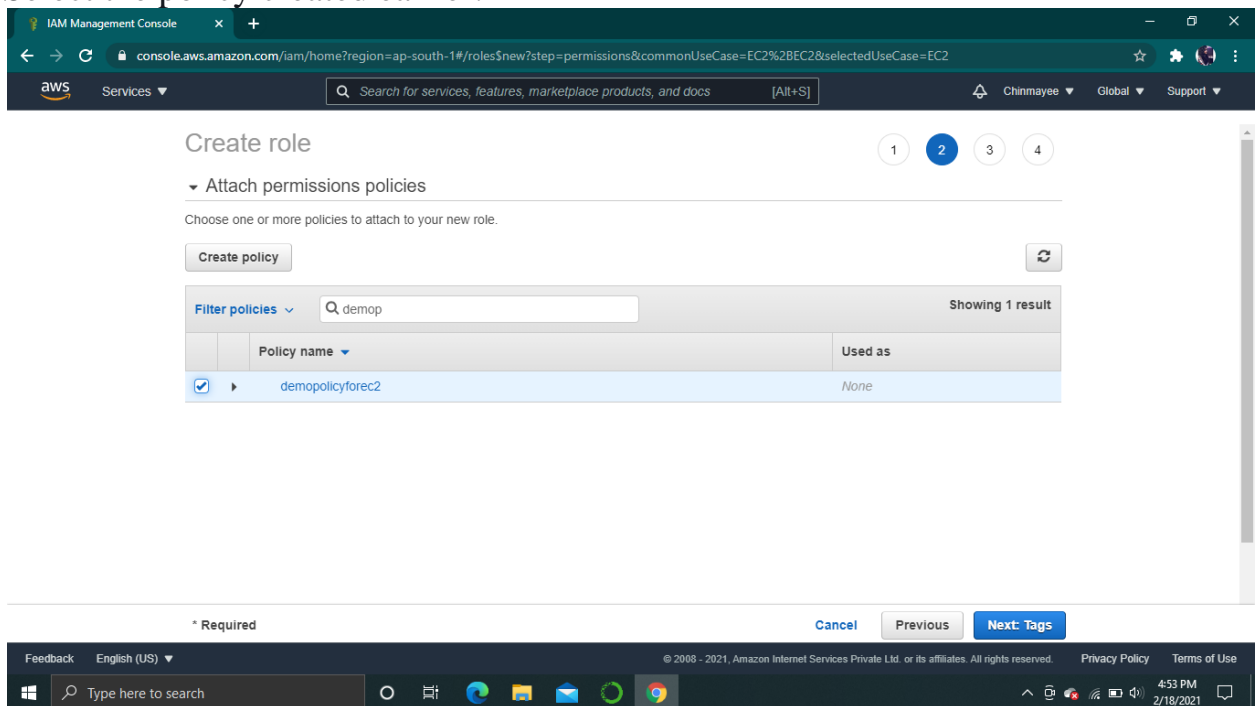
- In the navigation pane of the IAM console, choose Roles, and then choose Create role.



- For Select type of trusted entity, choose AWS service.
- Choose the EC2 service to allow to assume this role.



- Choose Next: Permissions.
- Select the policy created earlier.



- Choose Next and define the role with all its description and then select next.

IAM Management Console

console.aws.amazon.com/iam/home?region=ap-south-1#/roles\$new?step=review&commonUseCase=EC2%2BEC2&selectedUseCase=EC2&policies=arn:aws:iam::91453673...

Create role

1 2 3 4

Review

Provide the required information below and review this role before you create it.

Role name* roleforec2

Use alphanumeric and '+', '@', '_' characters. Maximum 64 characters.

Role description Allows EC2 instances to call AWS services on your behalf.

Maximum 1000 characters. Use alphanumeric and '+', '@', '_' characters.

Trusted entities AWS service: ec2.amazonaws.com

Policies demopolicyforec2

Permissions boundary Permissions boundary is not set

No tags were added.

* Required

Cancel Previous **Create role**

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Type here to search

4:53 PM 2/18/2021

- The IAM role has now been created.

IAM Management Console

console.aws.amazon.com/iam/home?region=ap-south-1#/roles

Identity and Access Management (IAM)

- Dashboard
- Access management
 - Groups
 - Users
 - Roles**
 - Policies
 - Identity providers
 - Account settings
- Access reports
 - Access analyzer
 - Archive rules
 - Analyzers
 - Settings
 - Credential report
 - Organization activity

What are IAM roles?

IAM roles are a secure way to grant permissions to entities that you trust. Examples of entities include the following:

- IAM user in another account
- Application code running on an EC2 instance that needs to perform actions on AWS resources
- An AWS service that needs to act on resources in your account to provide its features
- Users from a corporate directory who use Identity federation with SAML

IAM roles issue keys that are valid for short durations, making them a more secure way to grant access.

Additional resources:

- IAM Roles FAQ
- IAM Roles Documentation
- Tutorial: Setting Up Cross Account Access
- Common Scenarios for Roles

✓ The role **roleforec2** has been created.

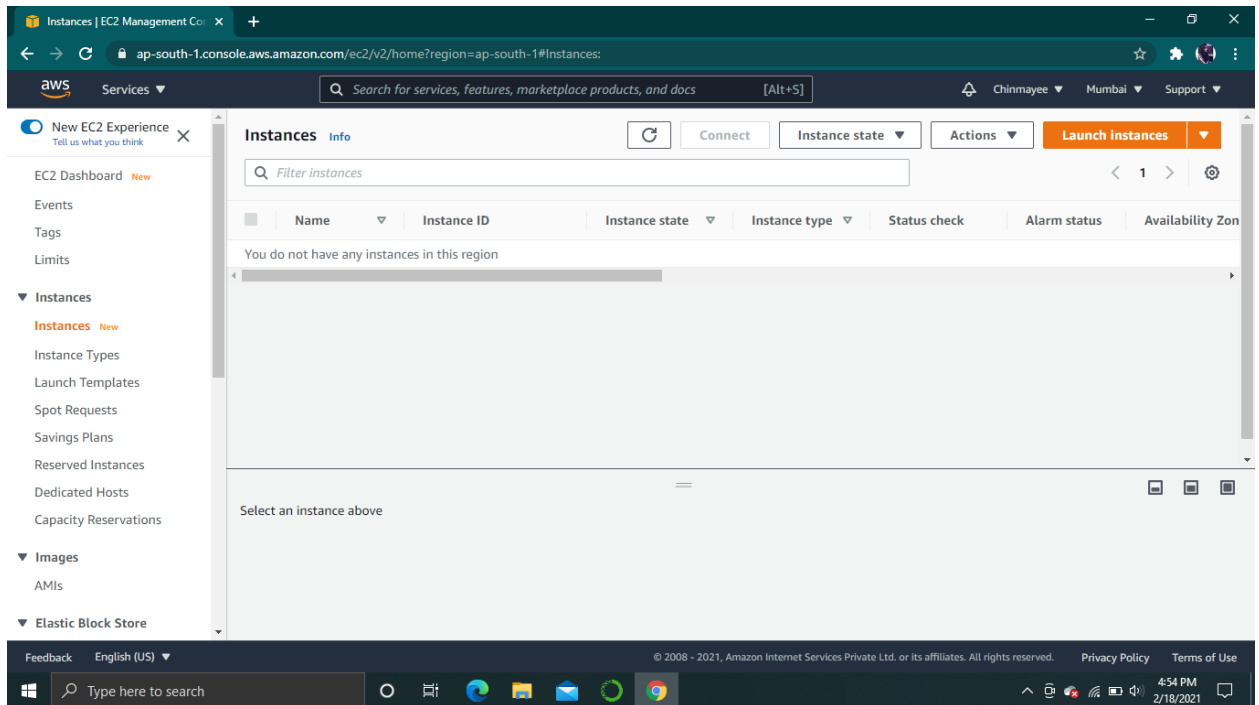
Create role Delete role

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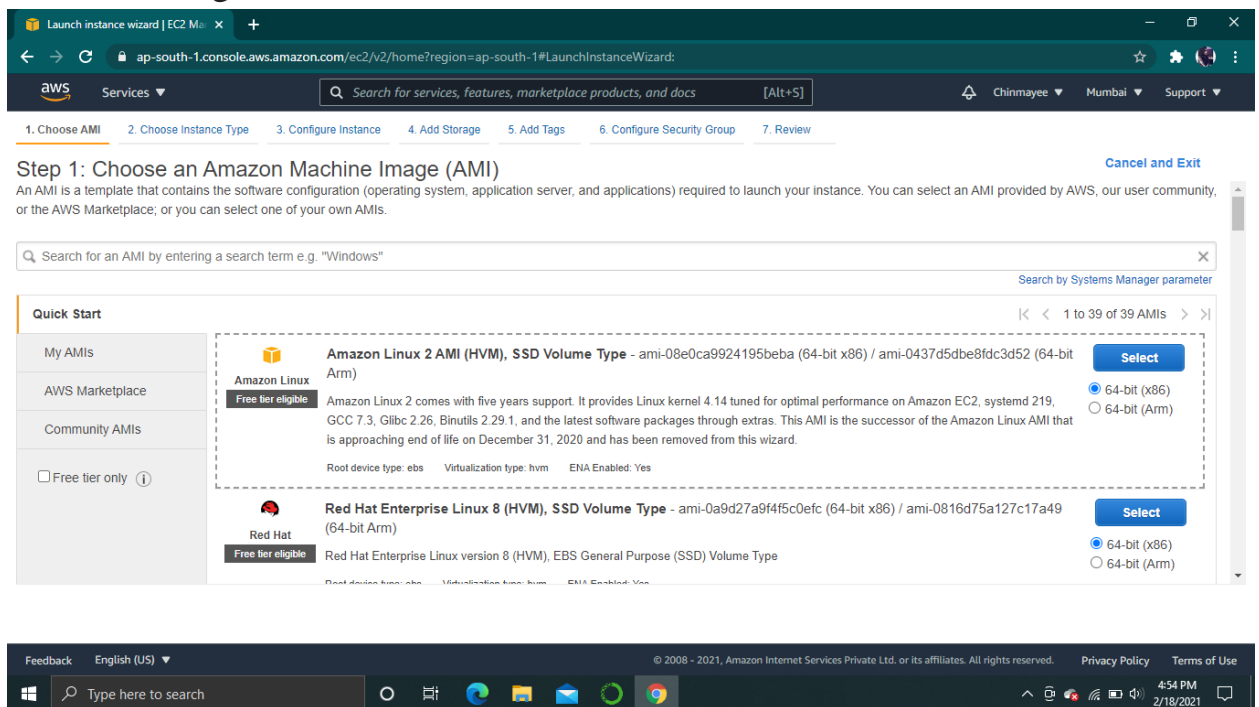
Type here to search

4:53 PM 2/18/2021

- Open the EC2 console.



- From the navigation bar, choose AMIs.



- Select the AMI, and then choose Launch.
- Choose an instance type, and then choose Next.

Launch instance wizard | EC2 M...

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:

Services Search for services, features, marketplace products, and docs [Alt+S]

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1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance families Current generation Show/Hide Columns

Currently selected: t2.micro (- ECUs, 1 vCPUs, 2.5 GHz, -, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	t2	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	t2	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.large	2	8	EBS only	-	Low to Moderate	Yes

Cancel Previous Review and Launch Next: Configure Instance Details

- Configure the instance details and add the IAM role to it.

Launch instance wizard | EC2 M...

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:

Services Search for services, features, marketplace products, and docs [Alt+S]

Chinmayee Mumbai Support

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances 1 Launch into Auto Scaling Group

Purchasing option ☐ Request Spot instances

Network vpc-t2667d9a (default) Create new VPC

Subnet No preference (default subnet in any Availability Zone) Create new subnet

Auto-assign Public IP Use subnet setting (Enable)

Placement group ☐ Add instance to placement group

Capacity Reservation Open

Domain join directory No directory Create new directory

IAM role roleforec2
None
roleforec2 Create new IAM role

Cancel Previous Review and Launch Next: Add Storage

- Select Next: Add Storage.

Launch instance wizard | EC2 M... x +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:

aws Services Search for services, features, marketplace products, and docs [Alt+S]

Chinmayee Mumbai Support

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/xvda	snap-07e0efc01c68d3978	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

[Add New Volume](#)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Tags](#)

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4:55 PM 2/18/2021

- **Configure the security group.**

Launch instance wizard | EC2 M... x +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:

aws Services Search for services, features, marketplace products, and docs [Alt+S]

Chinmayee Mumbai Support

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☒ Create a **new** security group
☐ Select an **existing** security group

Security group name:

Description:

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

[Add Rule](#)

Warning
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.

[Cancel](#) [Previous](#) [Review and Launch](#)

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- **Select review and launch the instance.**

Launch instance wizard | EC2 M...

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

Improve your instances' security. Your security group, launch-wizard-2, is open to the world.
Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

AMI Details [Edit AMI](#)

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-08e0ca9924195beba

Free tier eligible

Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is a...

Root Device Type: ebs Virtualization type: hvm

Instance Type [Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	-	1	1	EBS only	-	Low to Moderate

[Cancel](#) [Previous](#) [Launch](#)

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- Confirm the status of the instance from the dashboard.

Instances | EC2 Management Co...

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#Instances:

New EC2 Experience Tell us what you think

EC2 Dashboard **New**

Events

Tags

Limits

Instances

Instances **New**

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

Images

AMIs

Instances (1/1) Info

[Filter instances](#)

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
<input checked="" type="checkbox"/>	-	i-0377f705f64715bcd	Running	t2.micro	Initializing	No alarms +	ap-south-1b

Instance summary Info

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0377f705f64715bcd	13.233.101.3 open address	172.31.15.180
Instance state	Public IPv4 DNS	Private IPv4 DNS
Running	ec2-13-233-101-3.ap-south-	ip-172-31-15-180.ap-south-

key23.pem [Show all](#)

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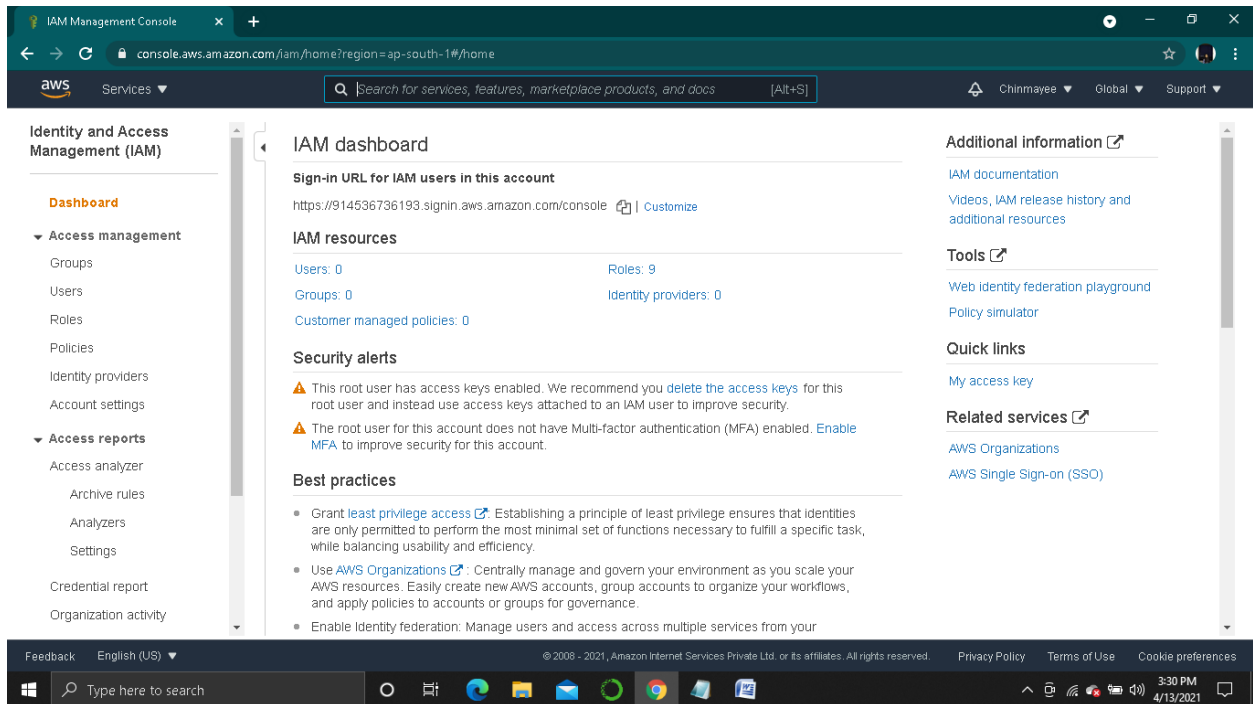
Type here to search

4:56 PM 2/18/2021

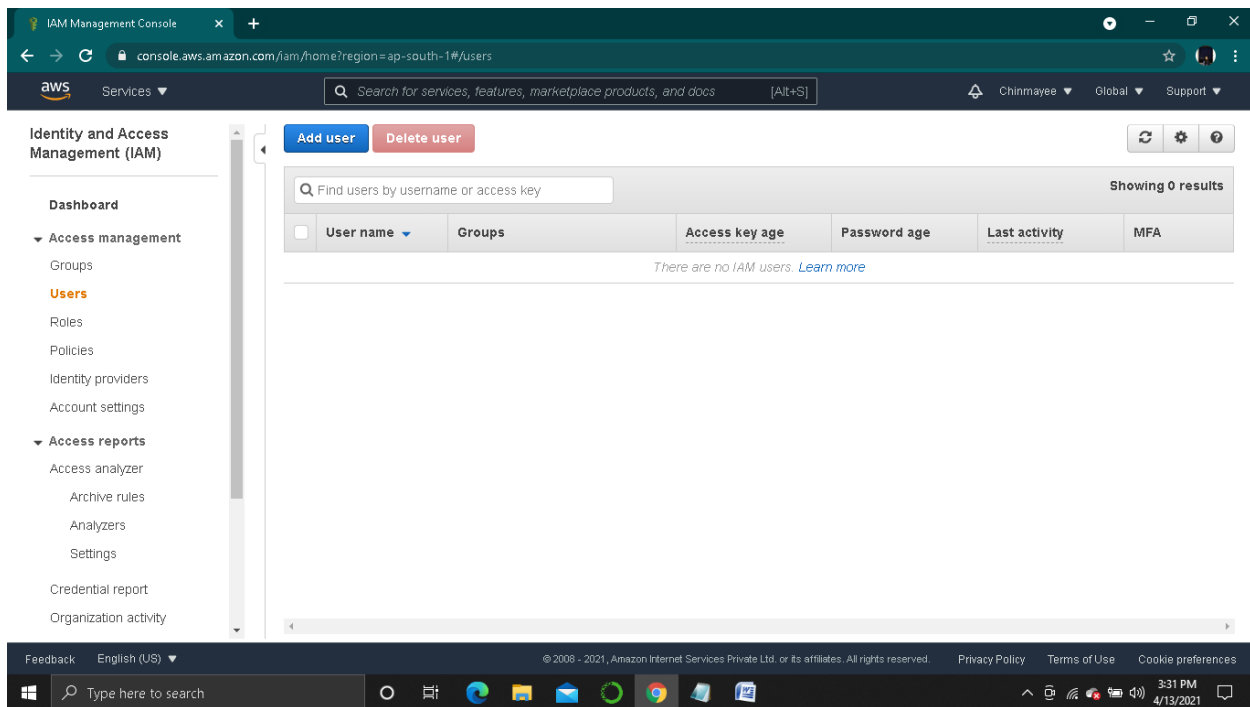
CREATE AN IAM USER AND ROLE

Steps to be Followed:-

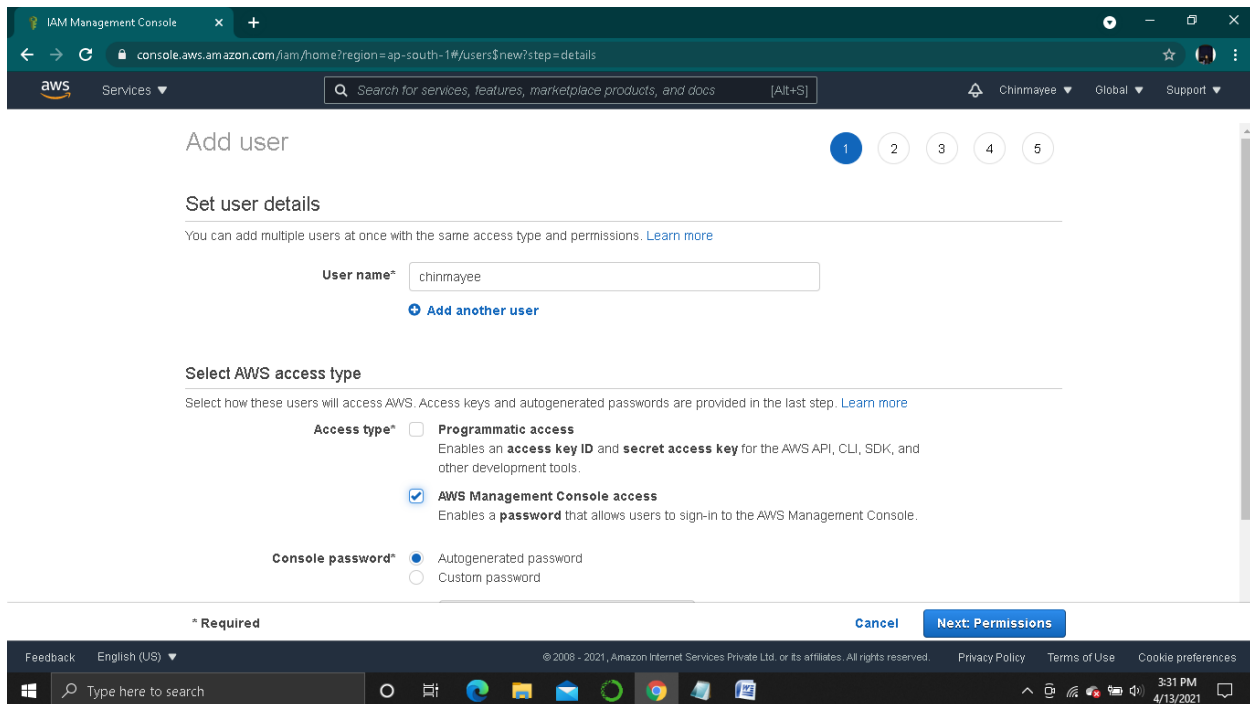
- Sign in to aws management console and search for IAM and the dashboard will appear.



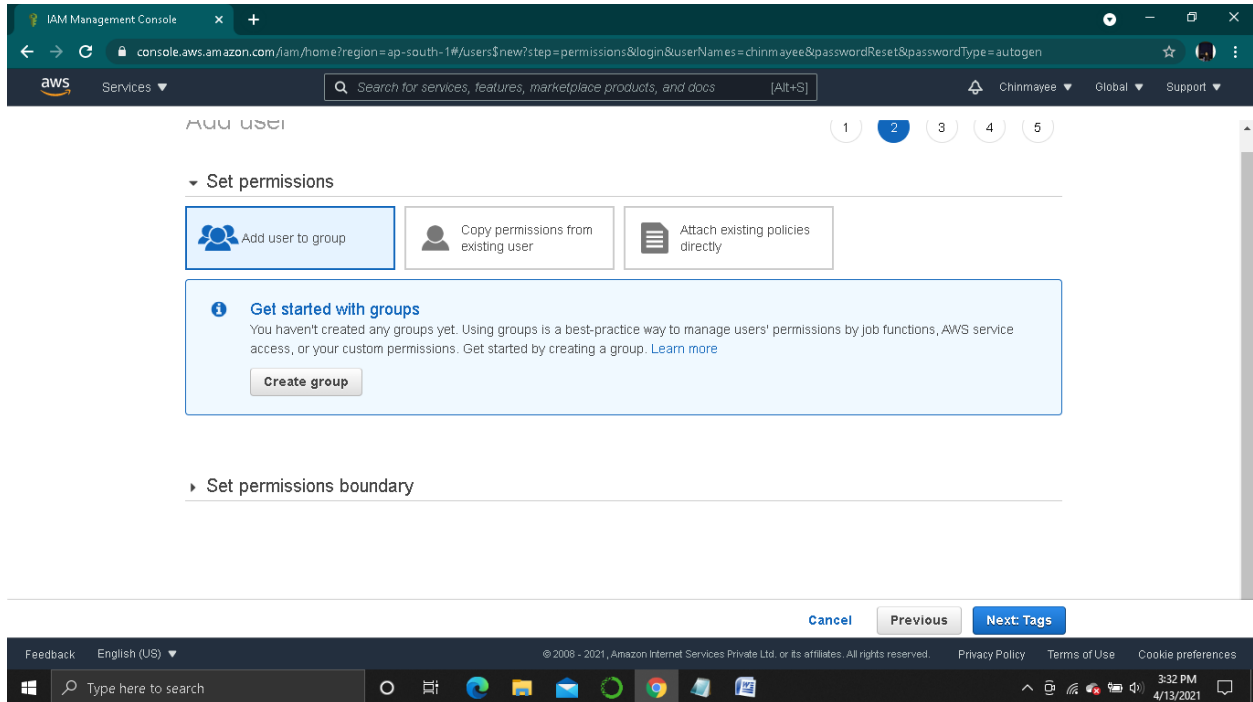
- In navigation pane choose user and then choose add user



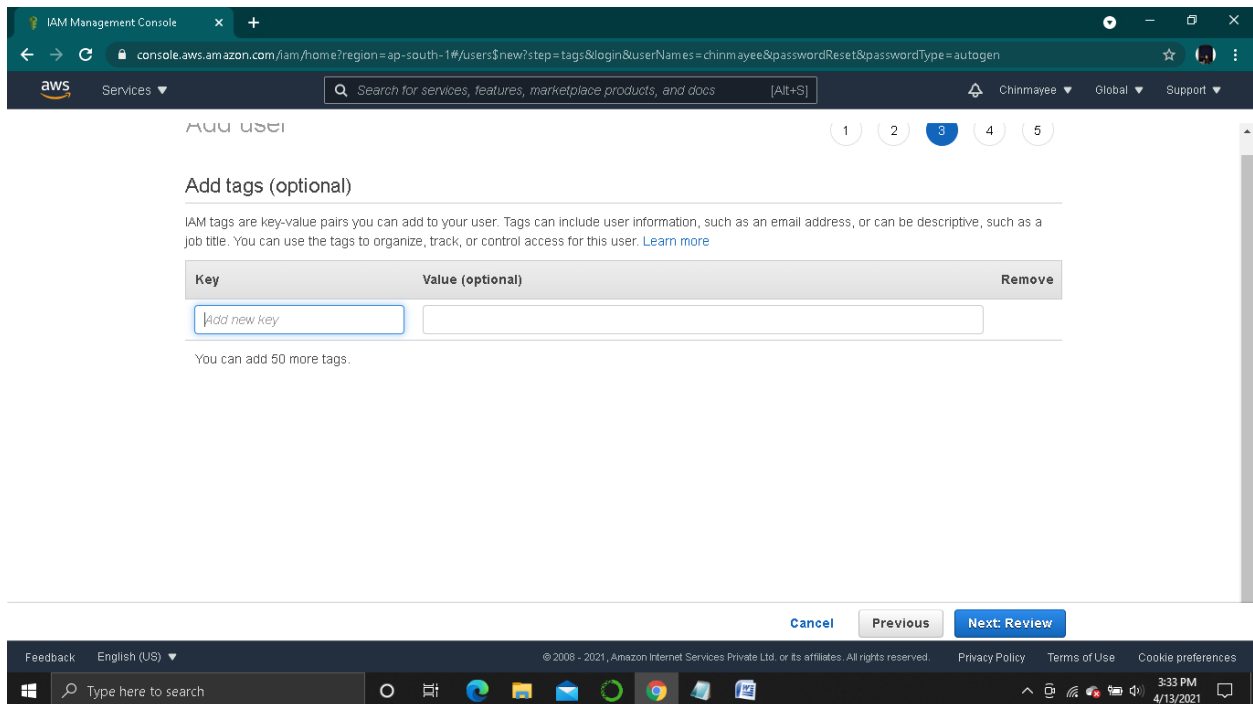
- Give the user a unique name and select the aws management console access type as aws management console access and choose auto generate password



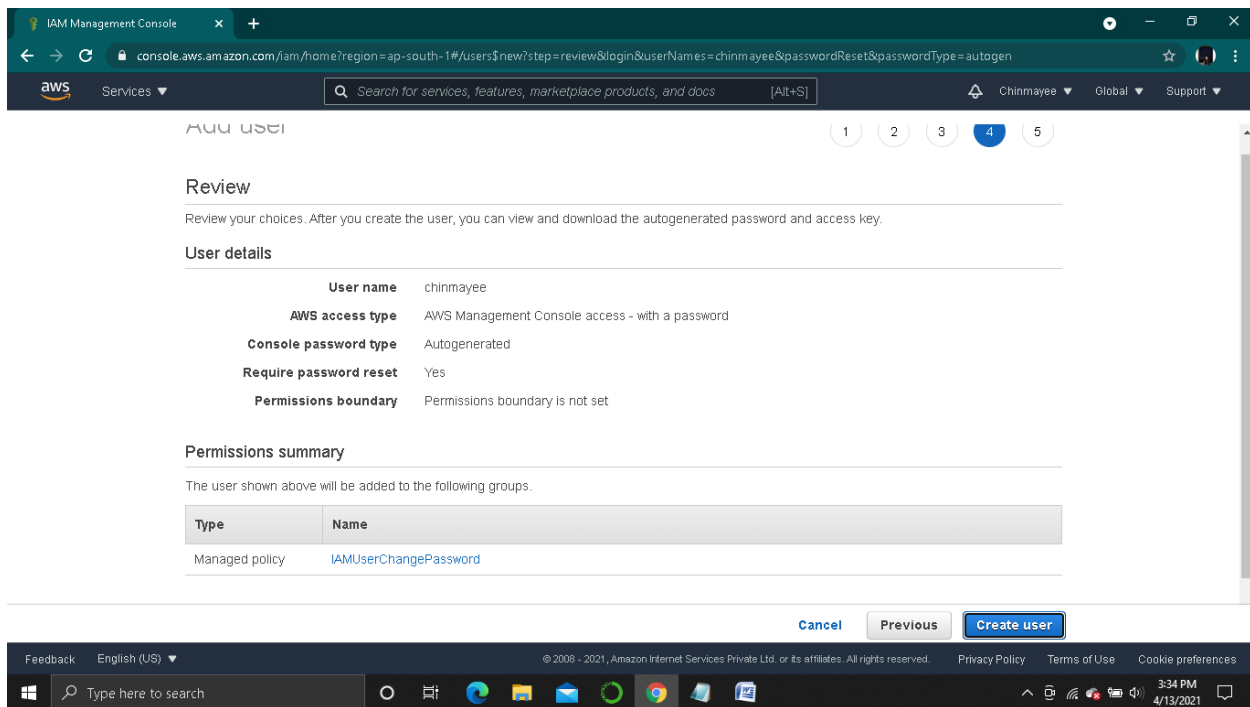
- On set permission assign a permission to set the new user



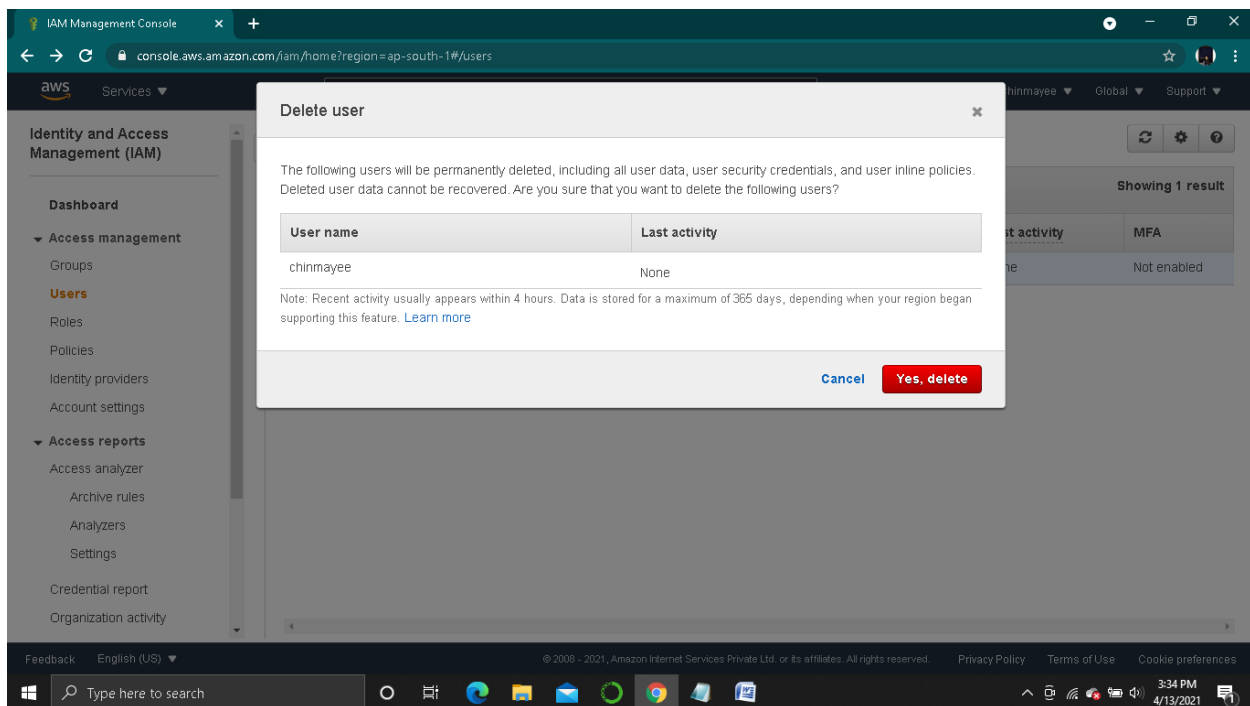
- Add a tag if required its optional and click next



- Click on create user

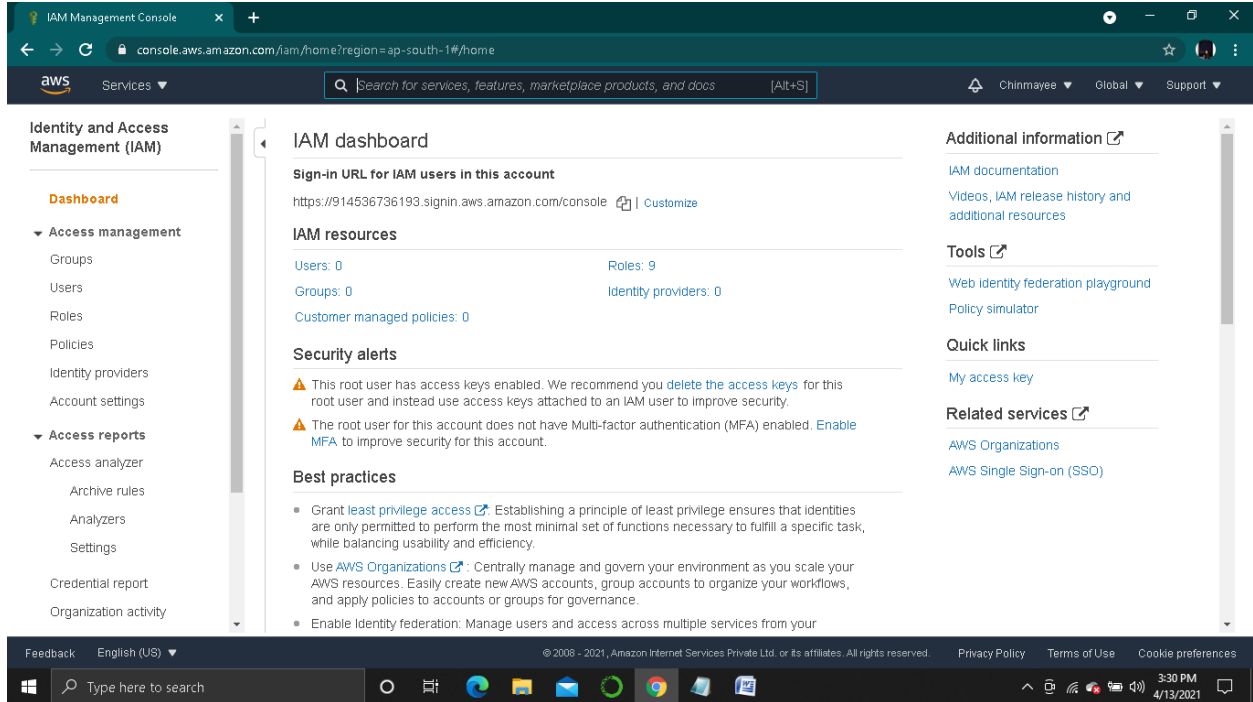


- To delete the user go to IAM console dashboard and click on delete user

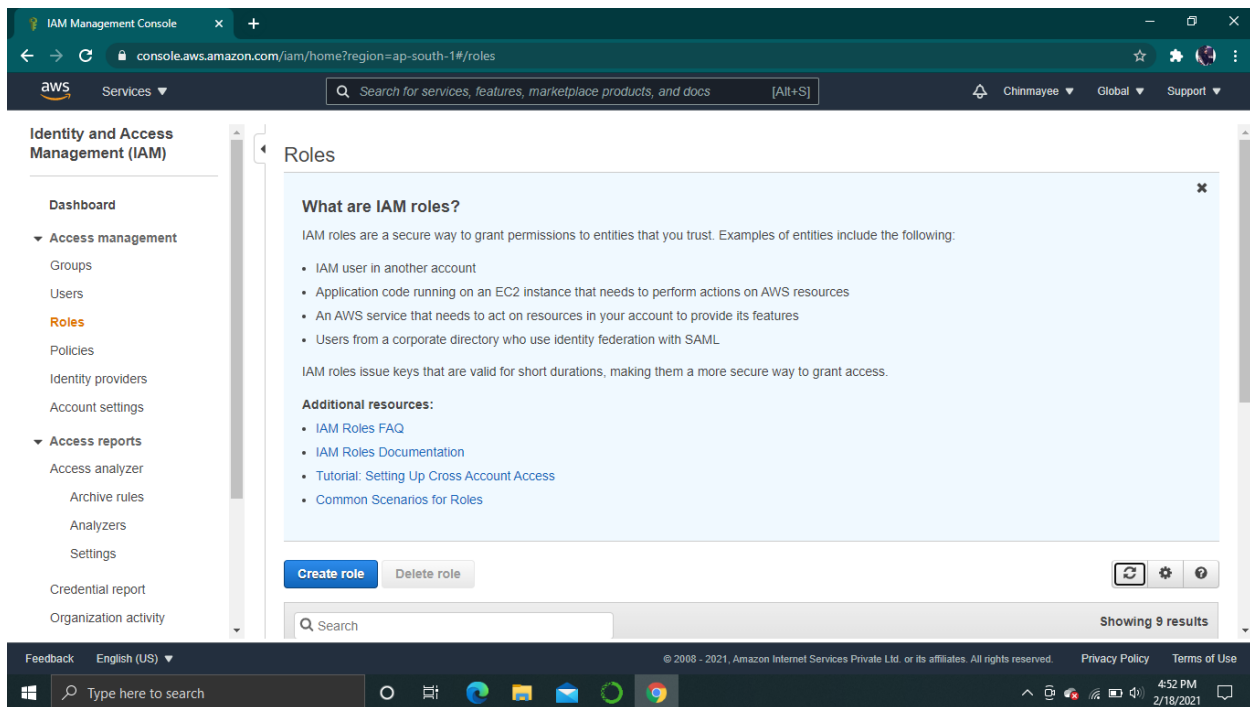


IAM ROLE

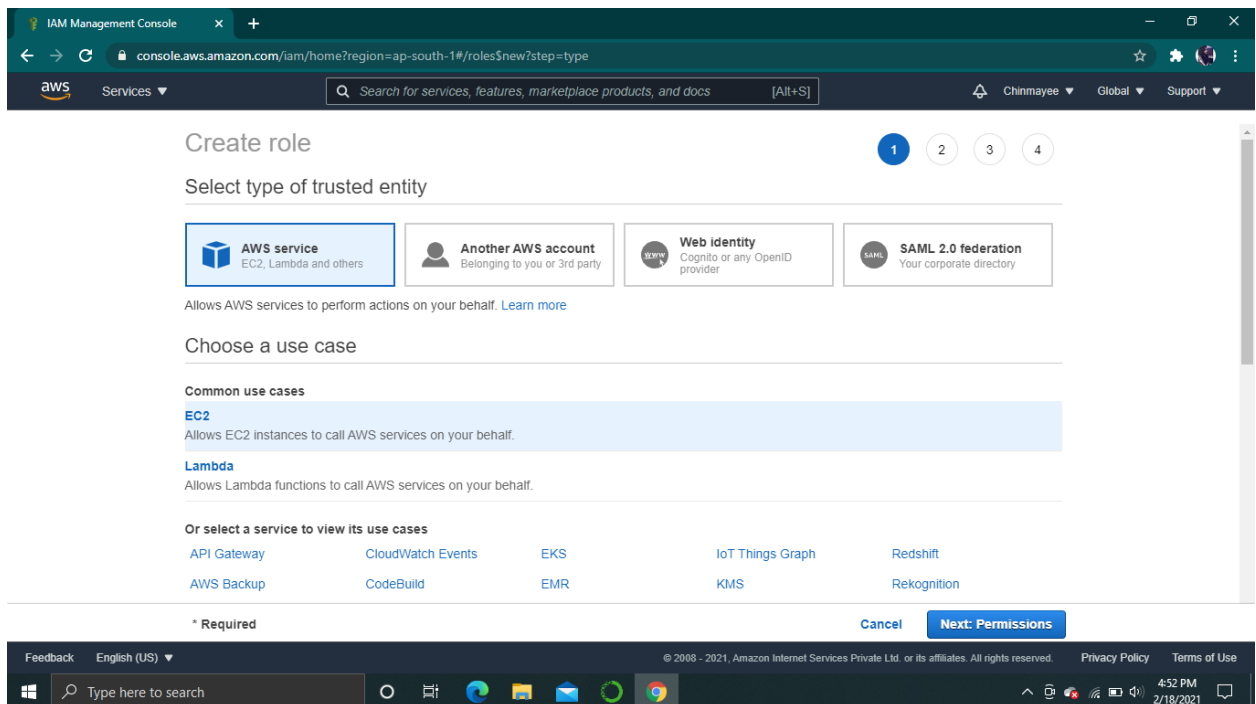
- Sign in to aws management console.



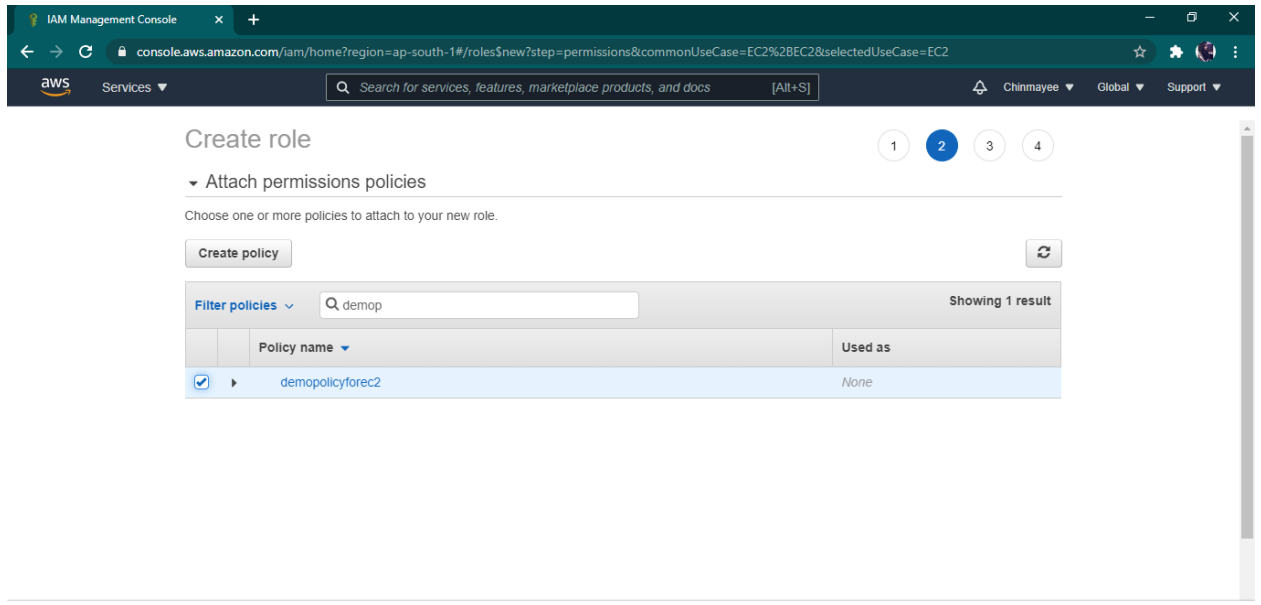
- In navigation panel choose role and then create roles.



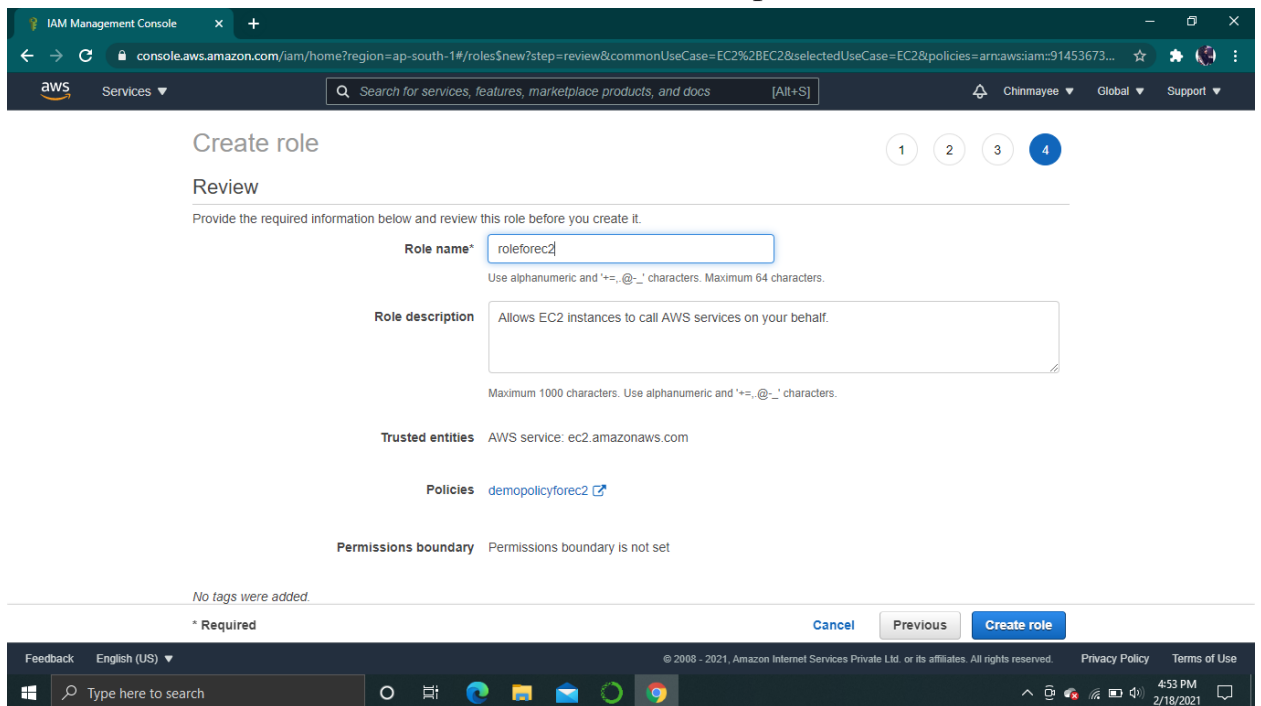
- For Select type of trusted entity, choose AWS service.
- Choose the EC2 service to allow to assume this role.



- Choose Next: Permissions.



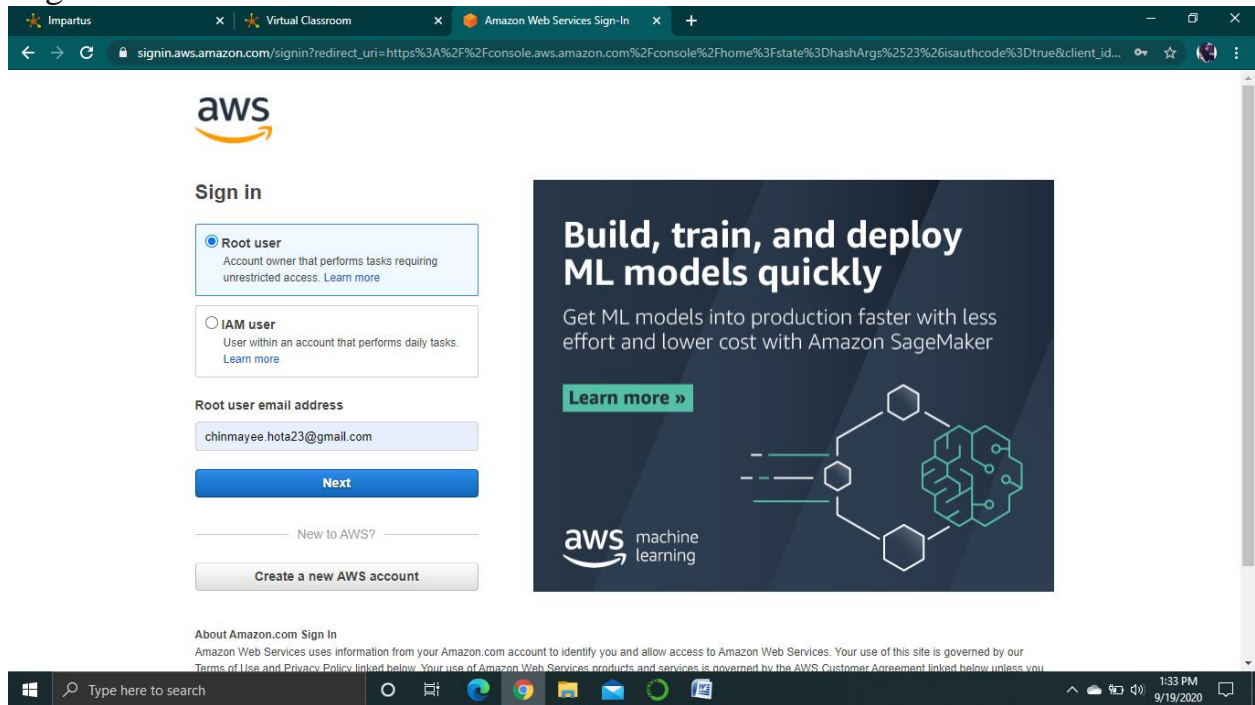
- Choose Next and define the role with all its description and then select next.



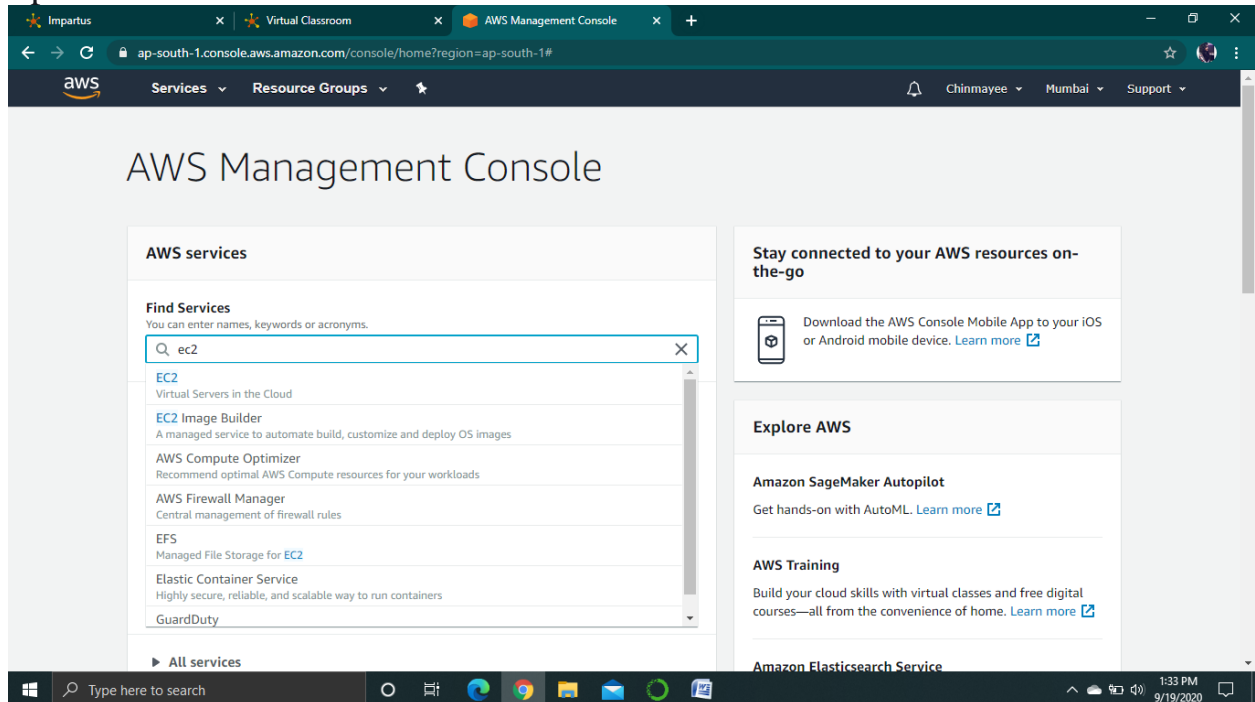
- The IAM role has now been created.

IMPLEMENTING ELASTIC LOAD BALANCING

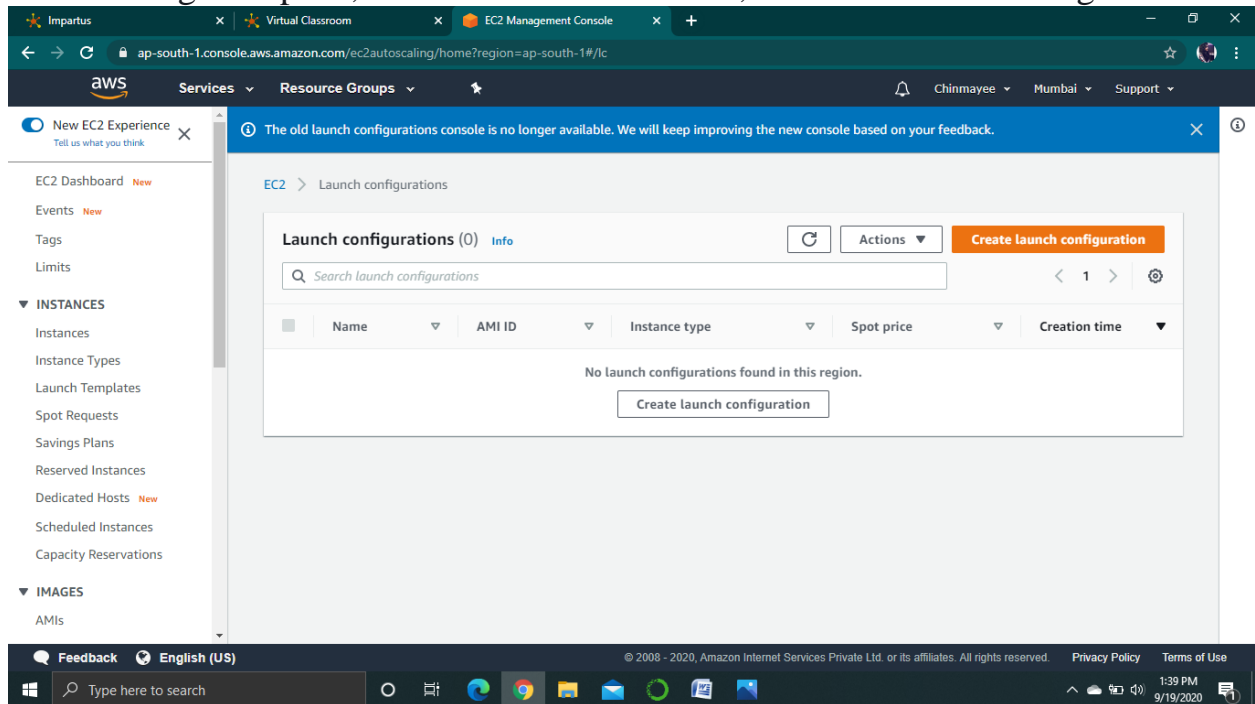
1. Login to AWS console.



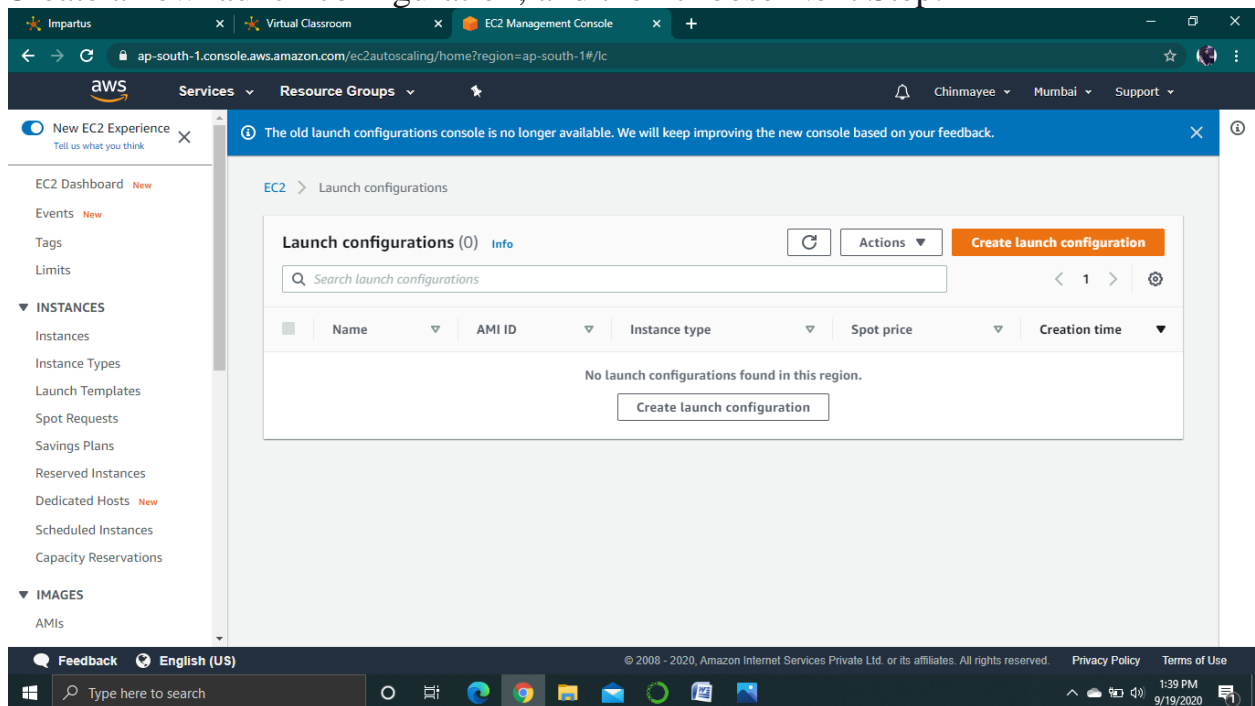
2. Open the Amazon EC2 service.



3. On the navigation pane, under AUTO SCALING, choose Launch Configurations.



4. Create a new launch configuration, and then choose Next Step.

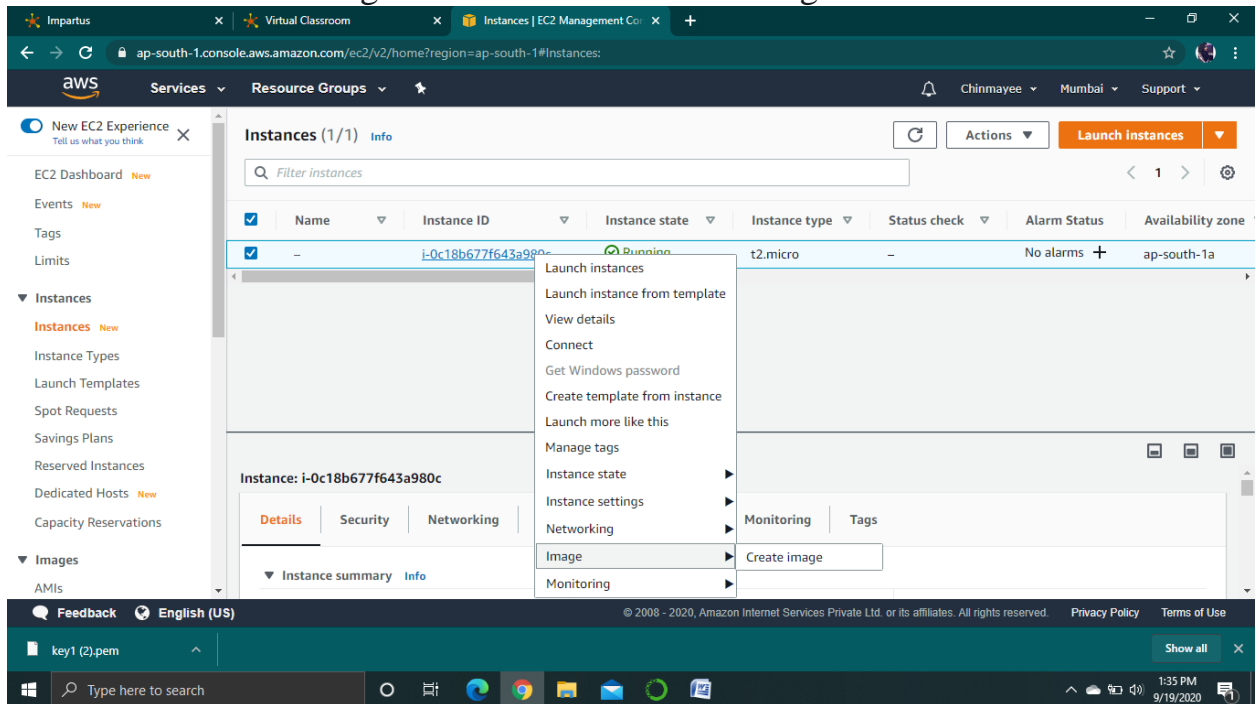


5. Configure all the details.

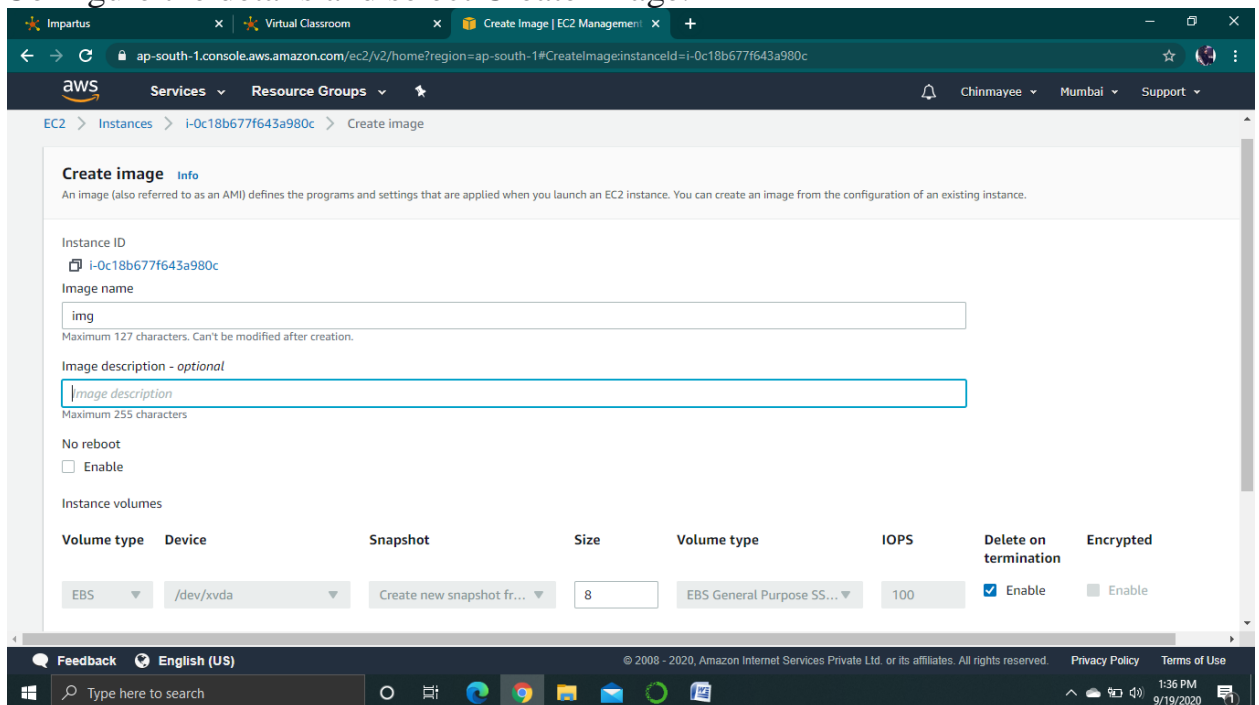
6. For selecting a free eligible AMI.

- Launch an EC2 instance.

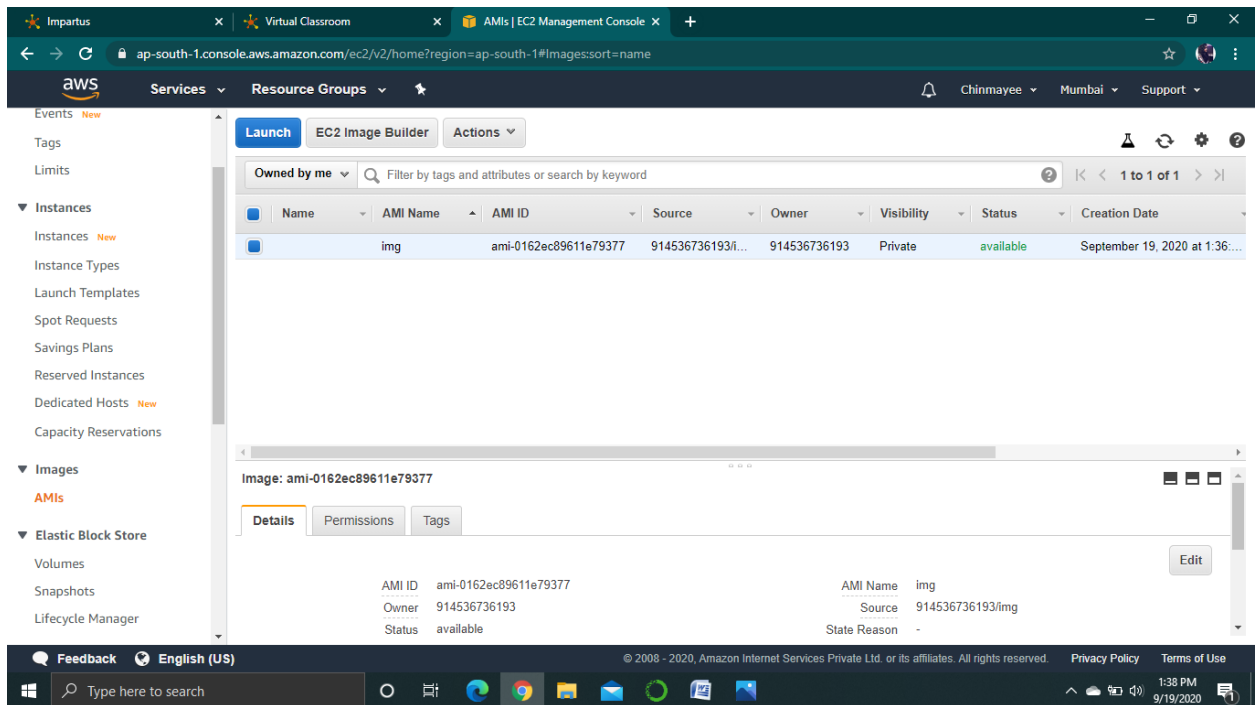
- Select the EC2 instance and choose actions.
- From actions select Image and then select Create Image.



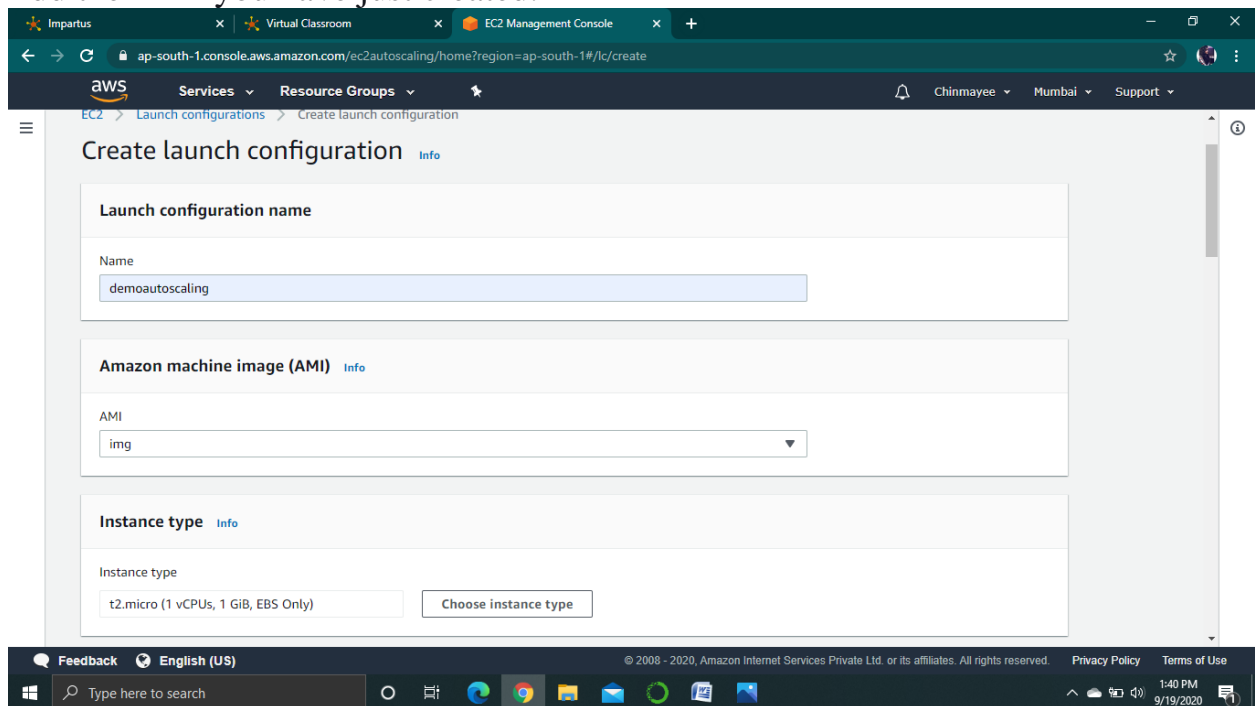
- Configure the details and select Create Image.



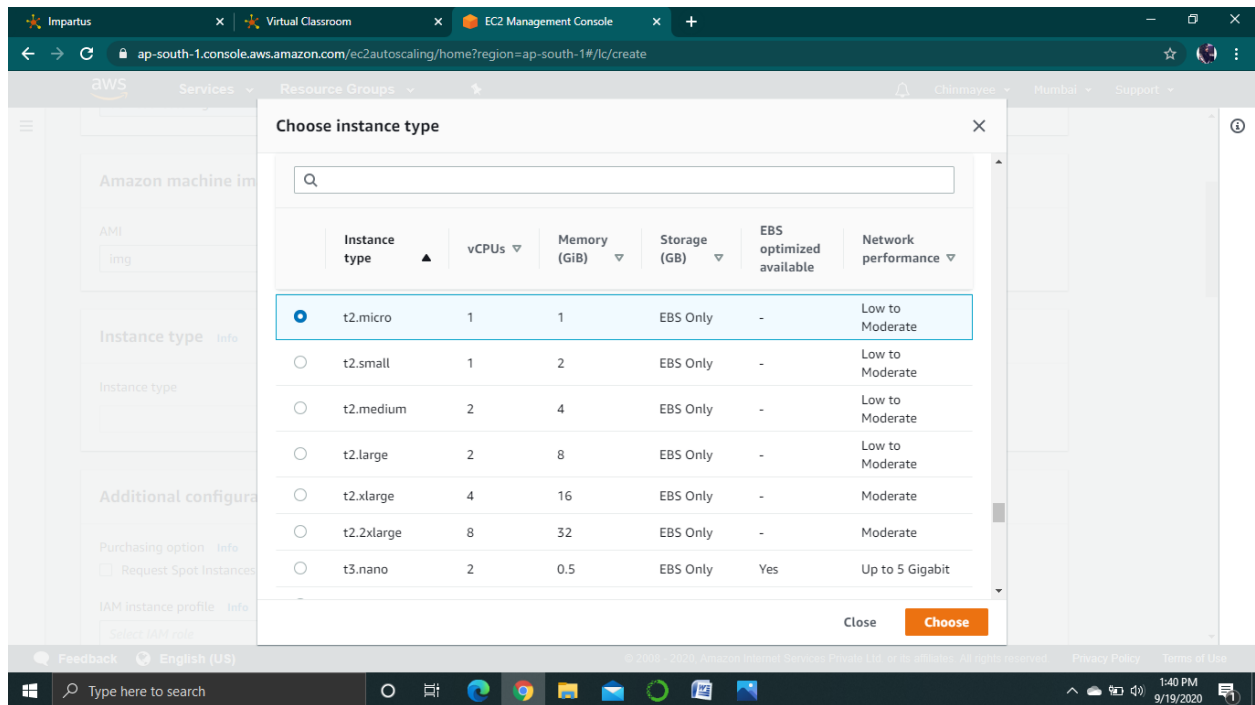
- From the AMI dashboard check the status.



7. Add the AMI you have just created.

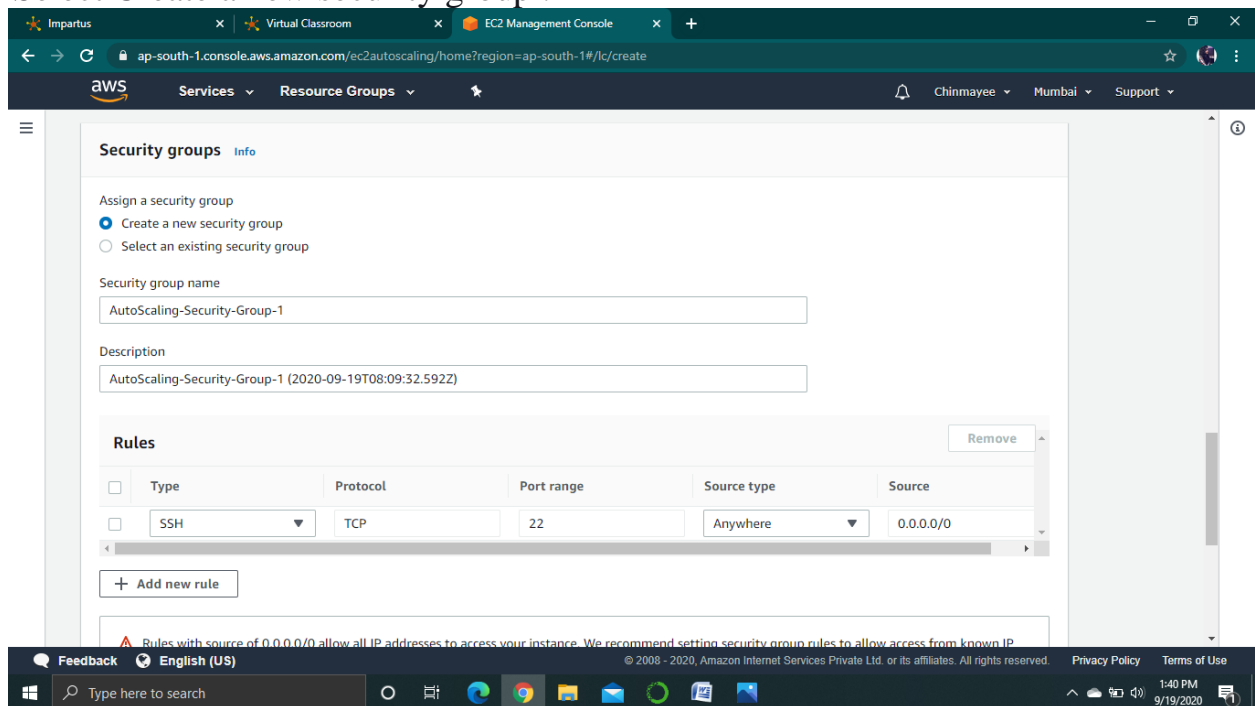


8. For the Choose Instance Type step, select a t2.micro instance.



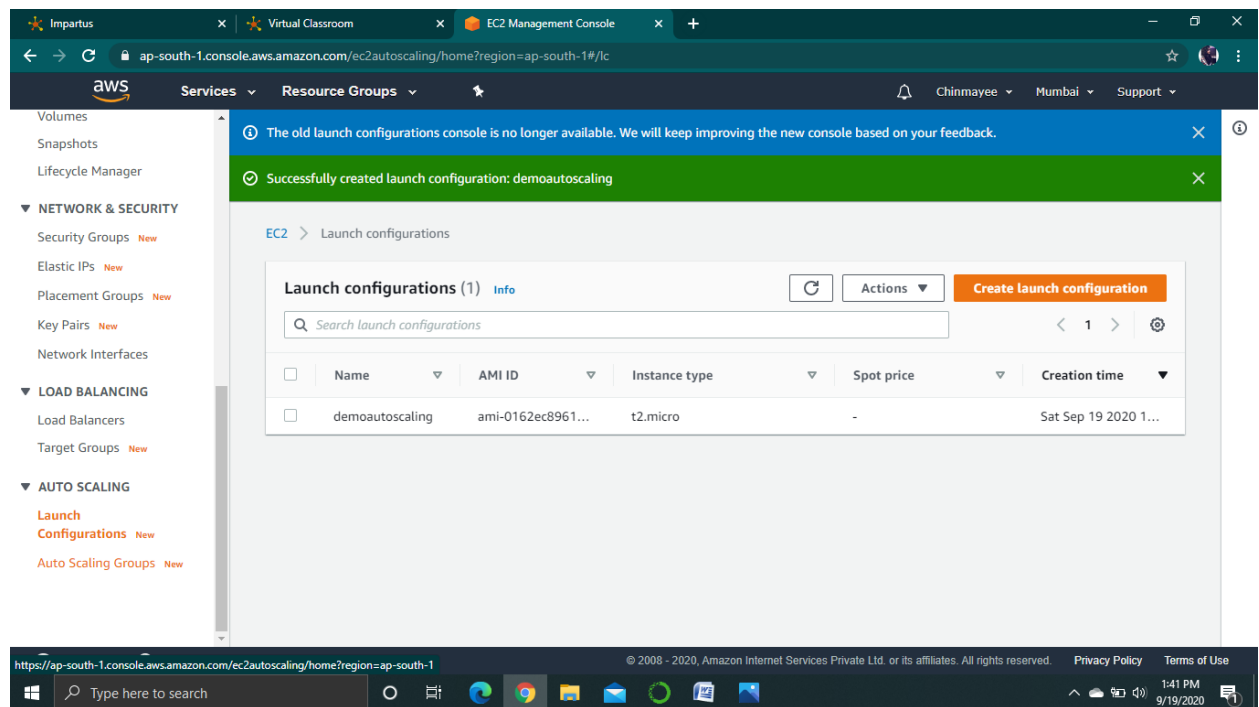
9. Choose Next: Configure details.

10. Select Create a new security group .



11. Choose Create launch configuration.

12. The wizard to Launch a Configuration is displayed.



CONFIGURE A LAUNCH TEMPLATE

1. Login to AWS console.
2. Open the Amazon EC2 service.
3. On the navigation pane, under INSTANCES, choose Launch Templates.
4. Choose Create launch template.

EC2 Management Console

Create launch template | EC2 M...

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#CreateTemplate:autoScalingGuidance=true

Services Resource Groups

Chinmayee Mumbai Support

EC2 > Launch templates > Create launch template

Create launch template

Creating a launch template allows you to create a saved instance configuration that can be reused, shared and launched at a later time. Templates can have multiple versions.

Launch template name and description

Launch template name - *required*

mydemotemplate

Must be unique to this account. Max 128 chars. No spaces or special characters like '&', '*', '@'.

Template version description

demo purpose

Max 255 chars

Auto Scaling guidance [Info](#)

Select this if you intend to use this template with EC2 Auto Scaling

☒ Provide guidance to help me set up a template that I can use with EC2 Auto Scaling

Template tags

Source template

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5. Configure all the details.
6. For AMI ID, choose a version of AMI you have created.
7. For Instance type, choose a t2.micro instance.

EC2 Management Console

Create launch template | EC2 M...

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#CreateTemplate:autoScalingGuidance=true

Services Resource Groups

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Amazon machine image (AMI) - *required* [Info](#)

AMI - *required*

img

ami-0162ec89611e79377

Catalog: My AMIs architecture: 64-bit (x86) virtualization: hvm

Instance type [Info](#)

Instance type

t2.micro

Free tier eligible

Family: General purpose 1 vCPU 1 GiB Memory

On-Demand Linux pricing: 0.0124 USD per Hour

On-Demand Windows pricing: 0.017 USD per Hour

[Instance types](#)

Key pair (login) [Info](#)

Key pair name

key1

[Create new key pair](#)

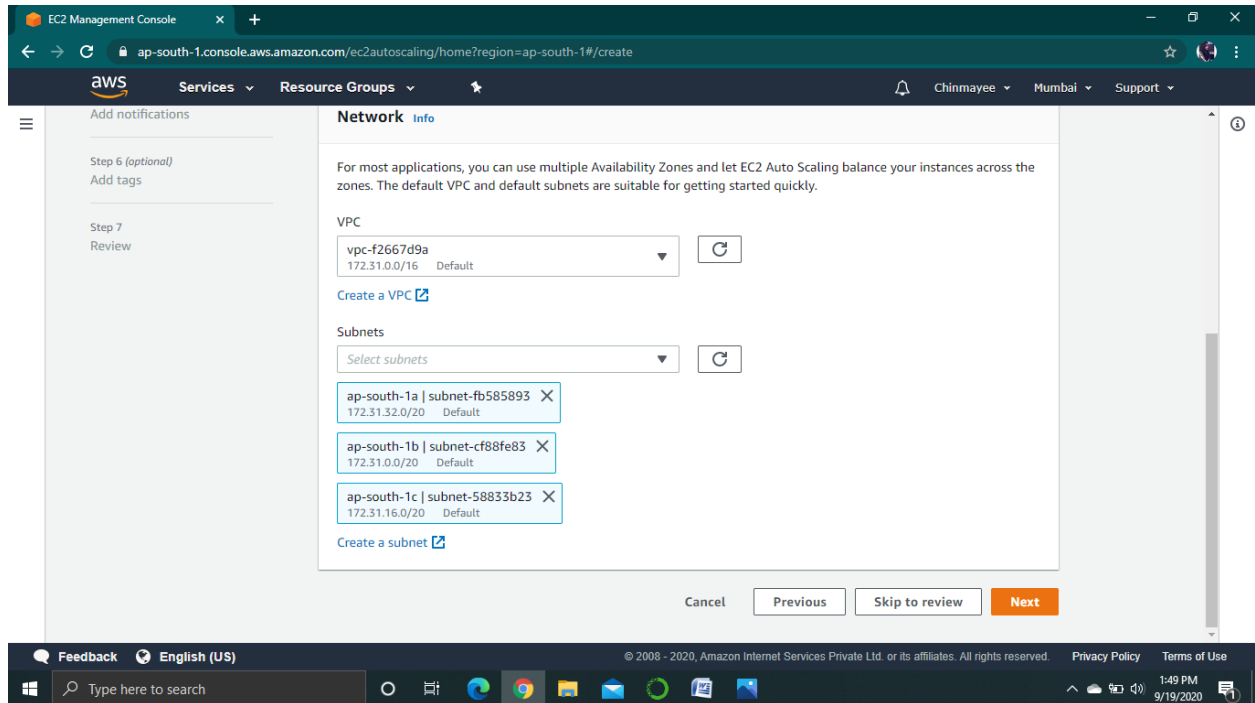
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8. For Key pair name, choose an existing key pair.
9. Leave Network type set to VPC.



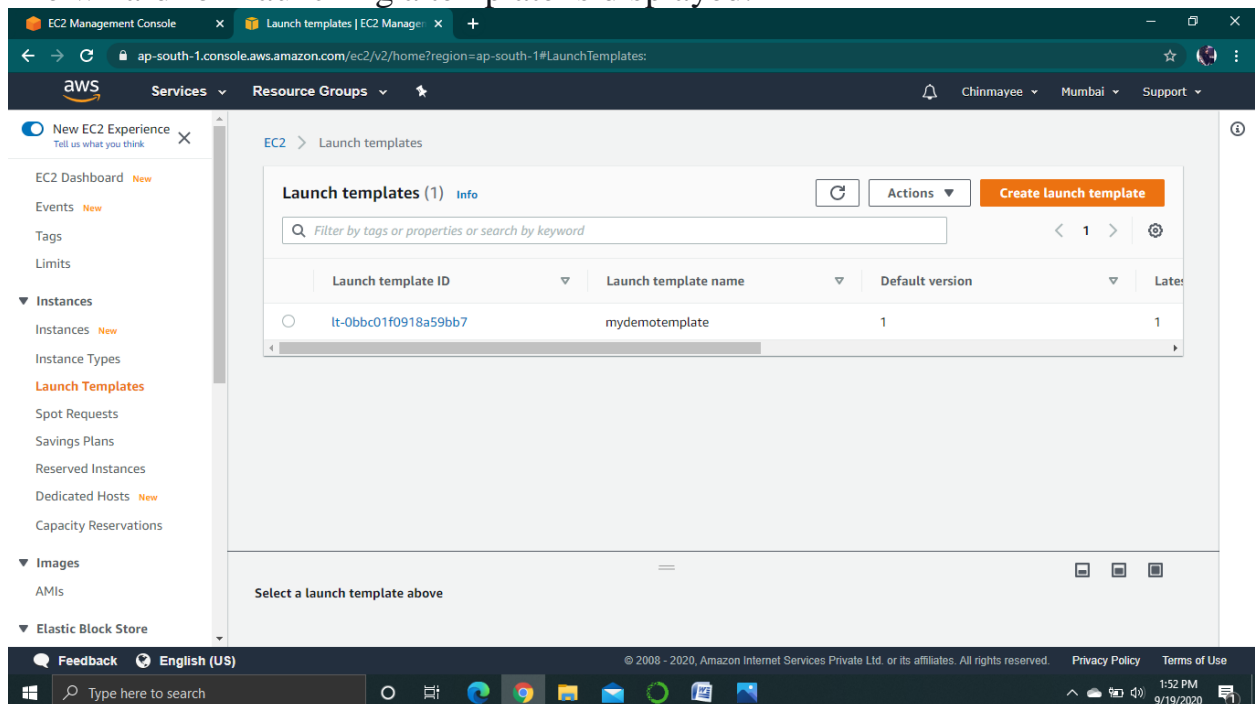
10. For Security Groups, specify the default security group for the VPC.

11. Configure default settings for EBS.

12. Leave Network Interfaces empty.

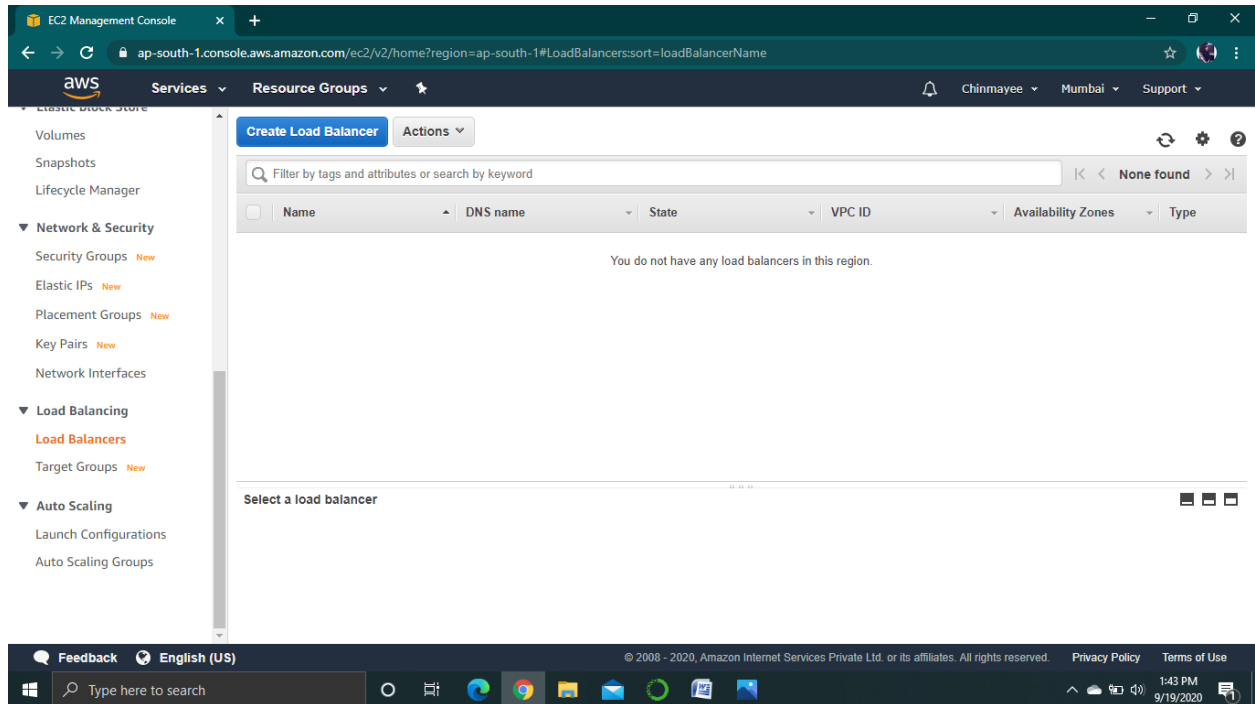
13. Scroll down and choose Create launch template.

14. The wizard for Launching a template is displayed.

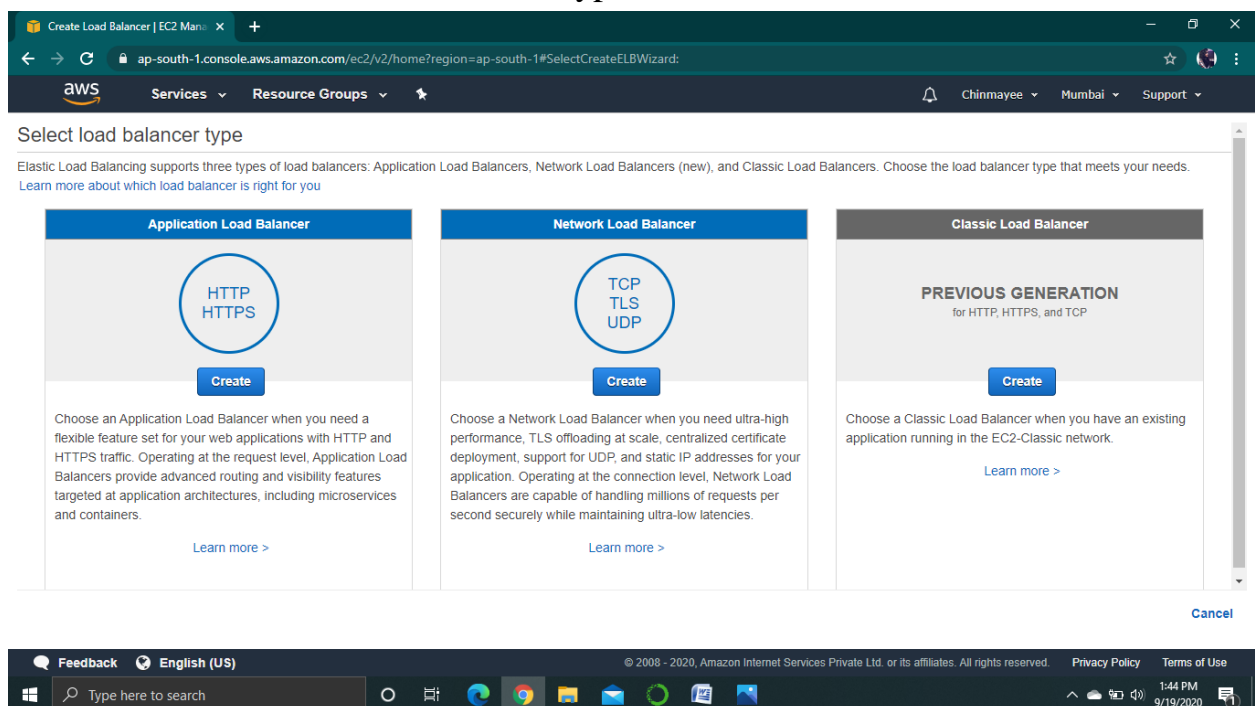


CONFIGURE LOAD BALANCING

1. Sign into AWS console and select EC2 service.
2. On the navigation pane, under LOAD BALANCING, choose Load Balancers and then choose create load balancer.



3. Choose Classic Load Balancer as the type of load balancer.



4. Define the Load Balancer and configure all its details.

Create Load Balancer | EC2 Man... x +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#CreateELBWizard:

Services Resource Groups

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 1: Define Load Balancer

Basic Configuration

This wizard will walk you through setting up a new load balancer. Begin by giving your new load balancer a unique name so that you can identify it from other load balancers you might create. You will also need to configure ports and protocols for your load balancer. Traffic from your clients can be routed from any load balancer port to any port on your EC2 instances. By default, we've configured your load balancer with a standard web server on port 80.

Load Balancer name:

Create LB inside:

Create an internal load balancer: ☐ (what's this?)

Enable advanced VPC configuration: ☐

Listener Configuration:

Load Balancer Protocol	Load Balancer Port	Instance Protocol	Instance Port
HTTP	80	HTTP	80

Add

Cancel Next: Assign Security Groups

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5. Assign the default security groups and configure security settings.

Create Load Balancer | EC2 Man... x +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#CreateELBWizard:

Services Resource Groups

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 2: Assign Security Groups

You have selected the option of having your Elastic Load Balancer inside of a VPC, which allows you to assign security groups to your load balancer. Please select the security groups to assign to this load balancer. This can be changed at any time.

Assign a security group: ☐ Create a new security group ☒ Select an existing security group

Filter: VPC security groups

Security Group ID	Name	Description
<input type="checkbox"/> sg-0a2a1c3d6c5875173	AutoScaling-Security-Group-1	AutoScaling-Security-Group-1 (2020-09-19T08:09:32.592Z)
<input checked="" type="checkbox"/> sg-0ca7ee69	default	default VPC security group
<input type="checkbox"/> sg-0c7a0b1db06b58f2d	launch-wizard-1	launch-wizard-1 created 2020-09-19T13:34:19.150+05:30
<input type="checkbox"/> sg-0a027b5526435aec7	WordPress Certified by Bitnami and Automattic-5-5-0 on Debian 10-AutogenByAWSMP-1	This security group was generated by AWS Marketplace and is based on recommended s

Cancel Previous Next: Configure Security Settings

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Type here to search

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6. Configure the health check.

Create Load Balancer | EC2 Man... x +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#CreateELBWizard:

Services Resource Groups

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 4: Configure Health Check

Your load balancer will automatically perform health checks on your EC2 instances and only route traffic to instances that pass the health check. If an instance fails the health check, it is automatically removed from the load balancer. Customize the health check to meet your specific needs.

Ping Protocol: HTTP
Ping Port: 80
Ping Path: /index.html

Advanced Details

Response Timeout: 5 seconds
Interval: 30 seconds
Unhealthy threshold: 2
Healthy threshold: 10

Cancel Previous Next: Add EC2 Instances

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Type here to search

7. Add the EC2 instance.

Create Load Balancer | EC2 Man... x +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#CreateELBWizard:

Services Resource Groups

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 5: Add EC2 Instances

The table below lists all your running EC2 Instances. Check the boxes in the Select column to add those instances to this load balancer.

VPC vpc-f2667d9a (172.31.0.0/16)

Instance	Name	State	Security groups	Zone	Subnet ID	Subnet CIDR
<input checked="" type="checkbox"/>	i-0c18b677f643a980c	running	launch-wizard-1	ap-south-1a	subnet-fb585893	172.31.32.0/20

Availability Zone Distribution

1 instance in ap-south-1a

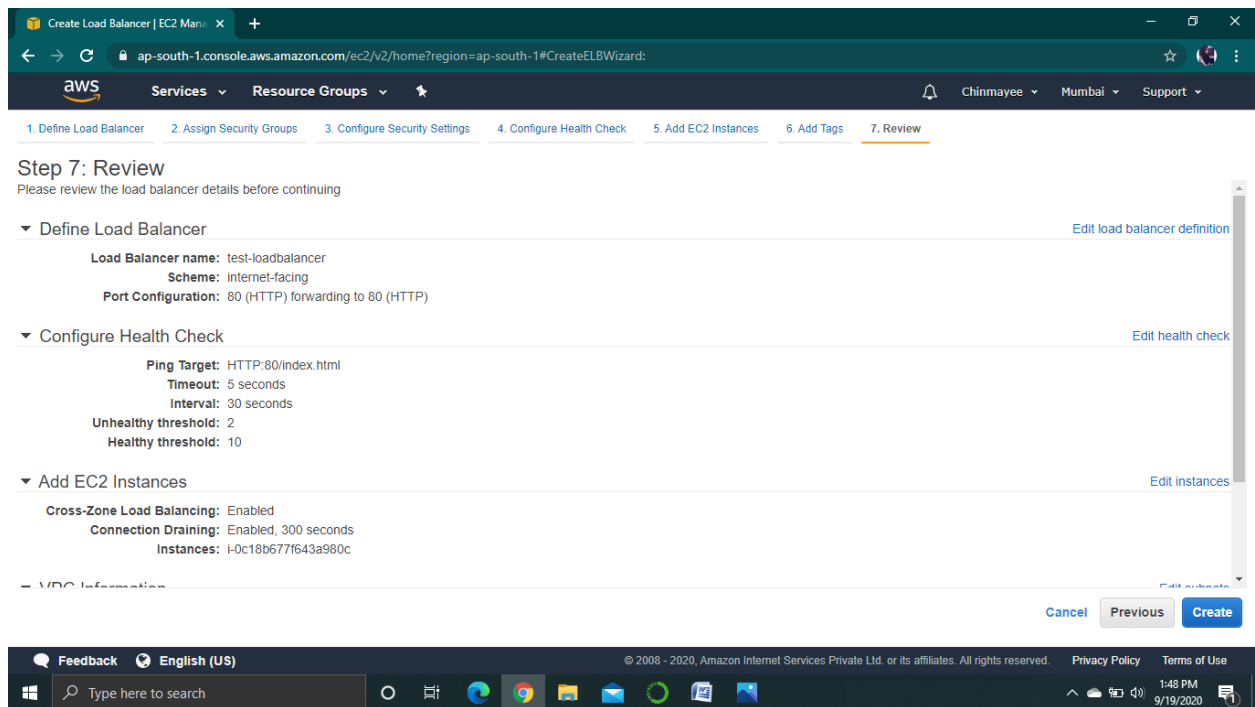
☒ Enable Cross-Zone Load Balancing
☒ Enable Connection Draining 300 seconds

Cancel Previous Next: Add Tags

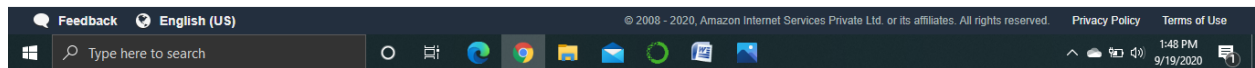
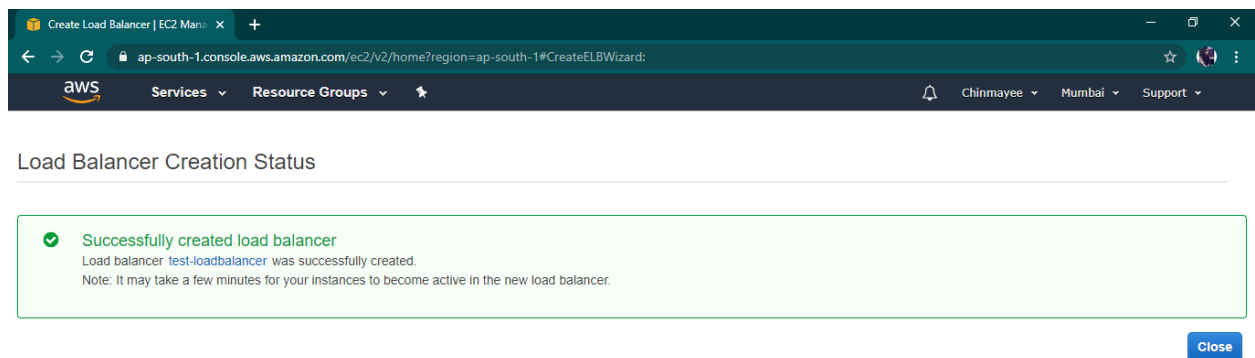
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Type here to search

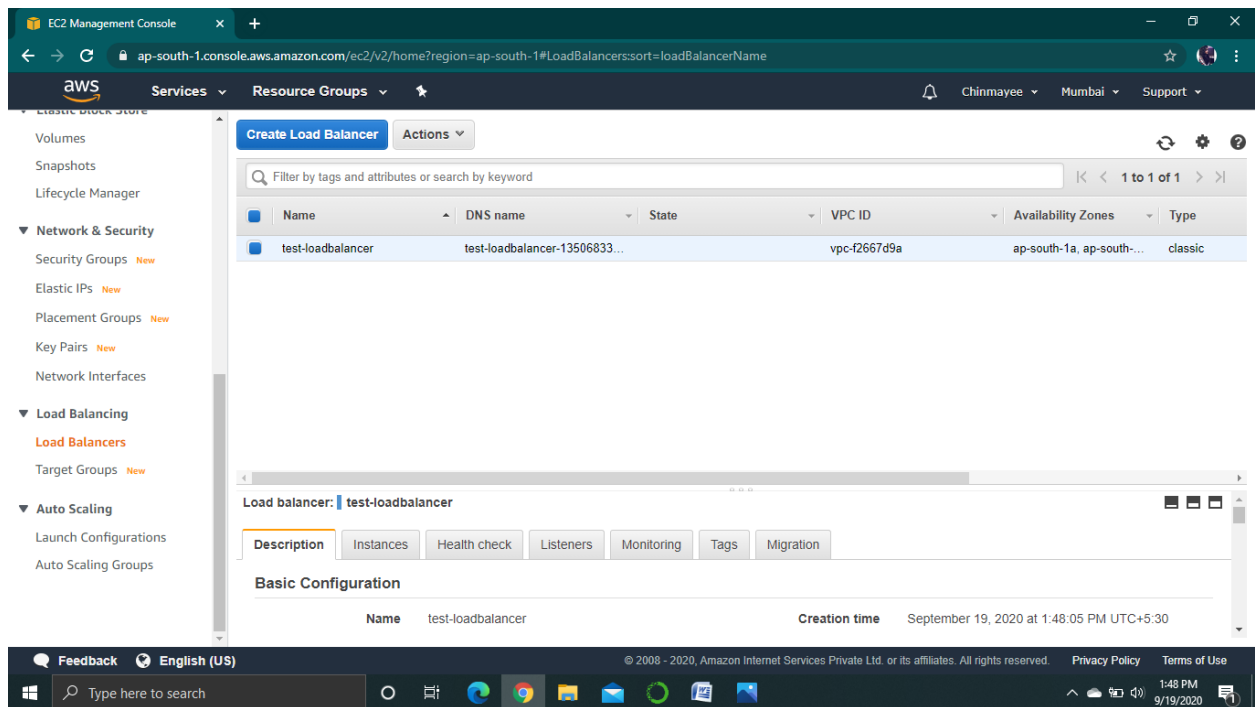
8. Add tags and click on review.



9. Check the status of the load balancer.

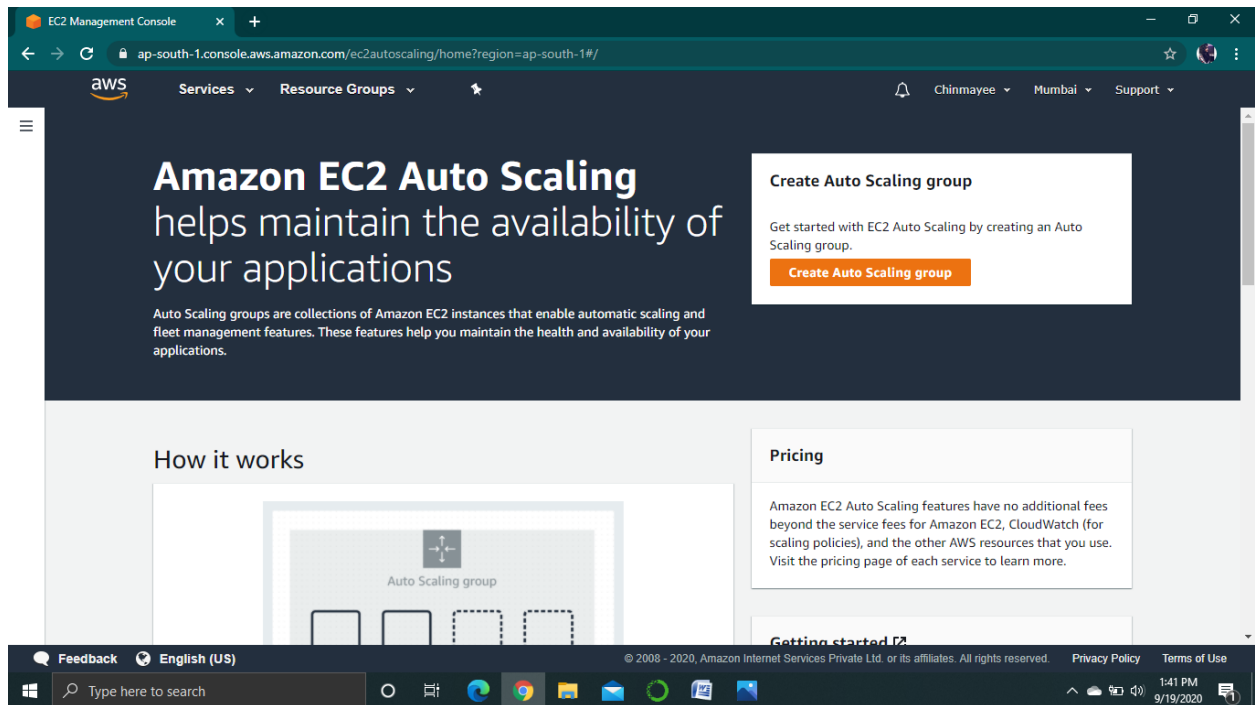


10. The load balancer created will be displayed on the dashboard.

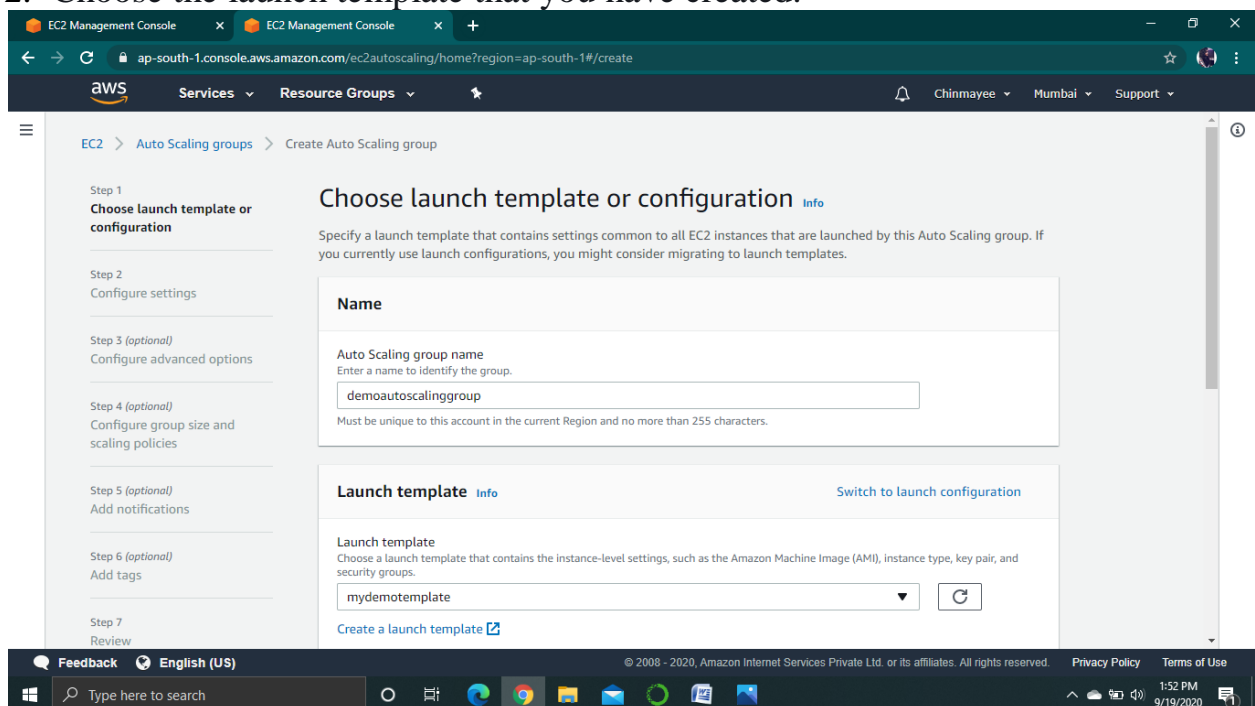


IMPLEMENTING AUTO SCALING GROUP

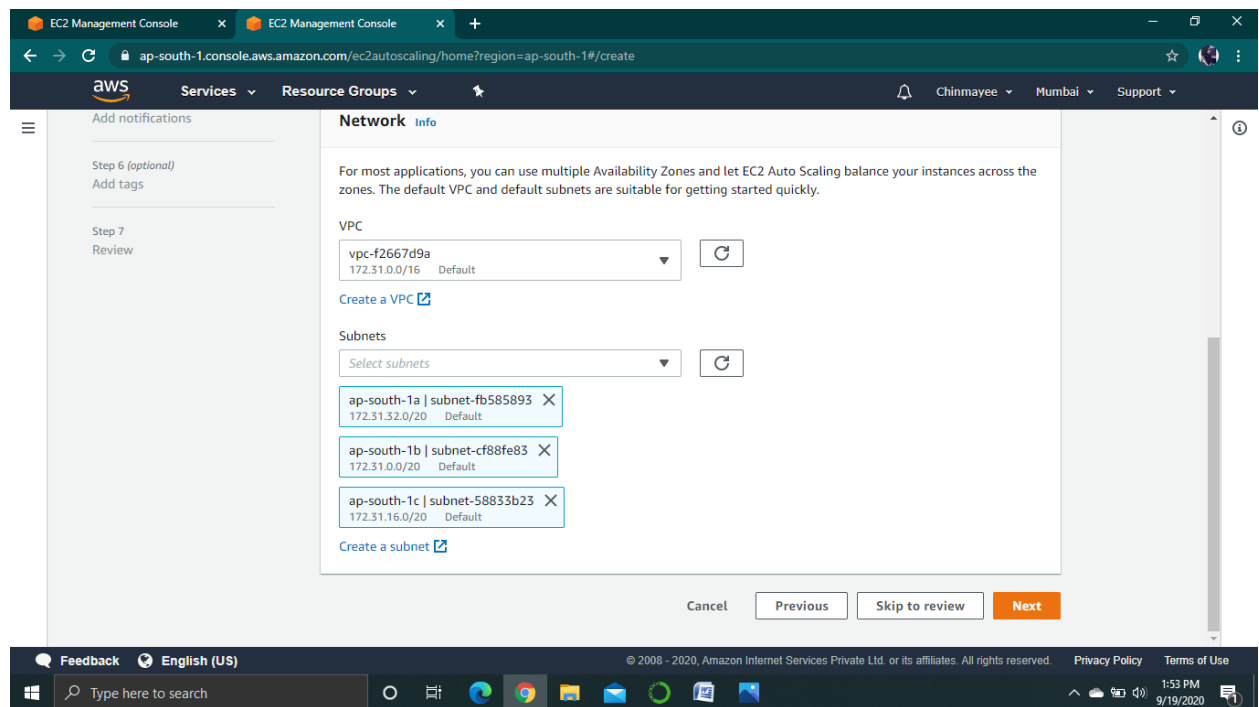
1. From EC2 dashboard, on the Auto Scaling groups page, choose Create an Auto Scaling group.



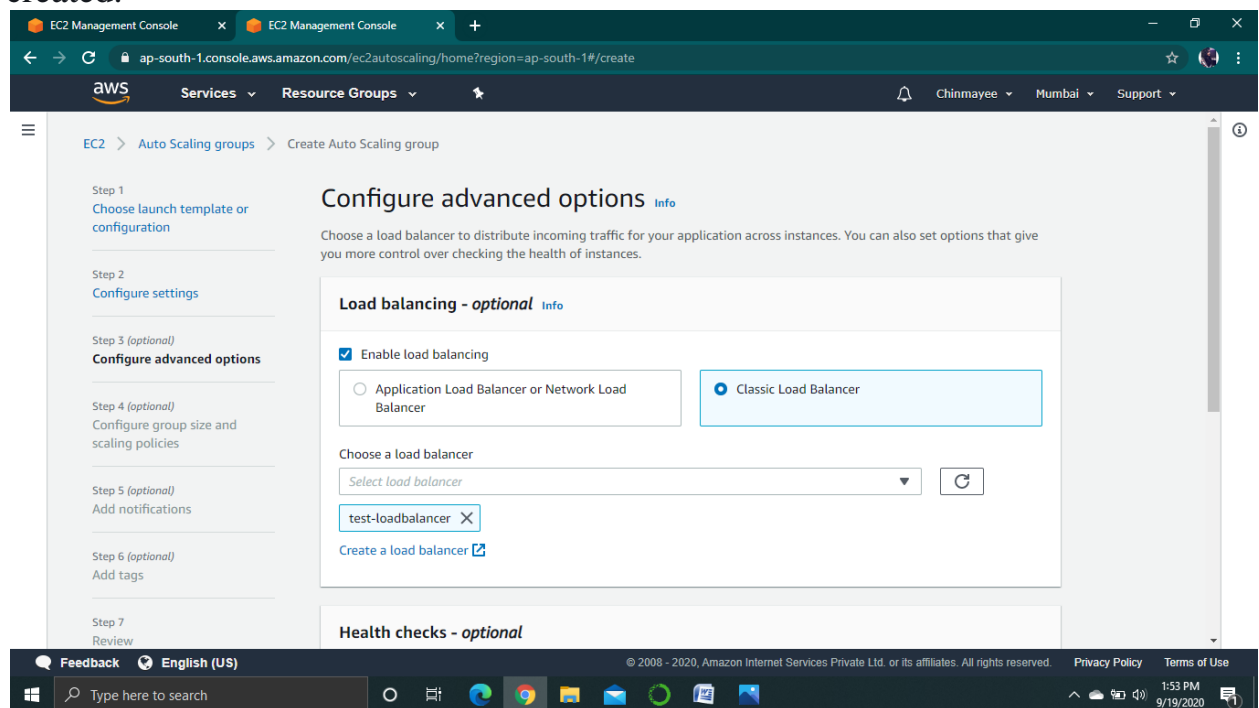
2. Choose the launch template that you have created.



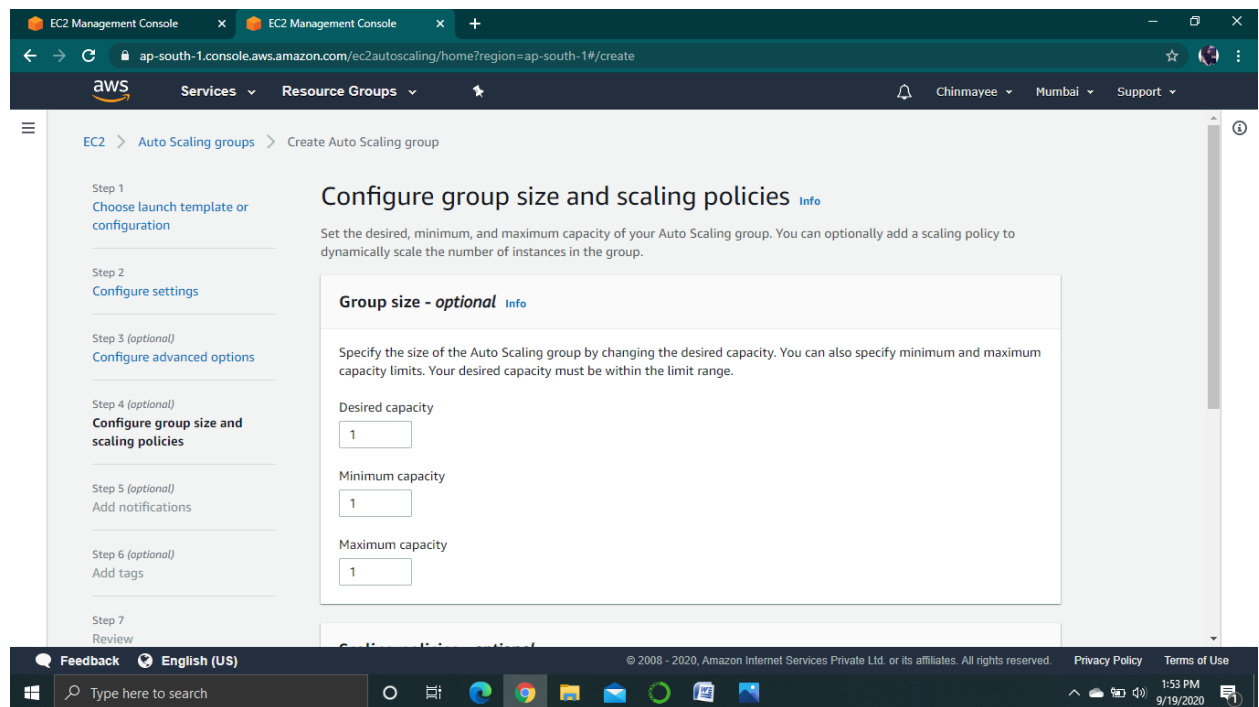
3. Choose the default version of the launch template to use when scaling out.
4. Choose Next.
5. Keep Network set to the default VPC for your chosen AWS Region.
6. For **Subnet**, choose a subnet from each Availability Zone that you want to include.



7. Enable the load balancing option and select the load balancer which you have created.

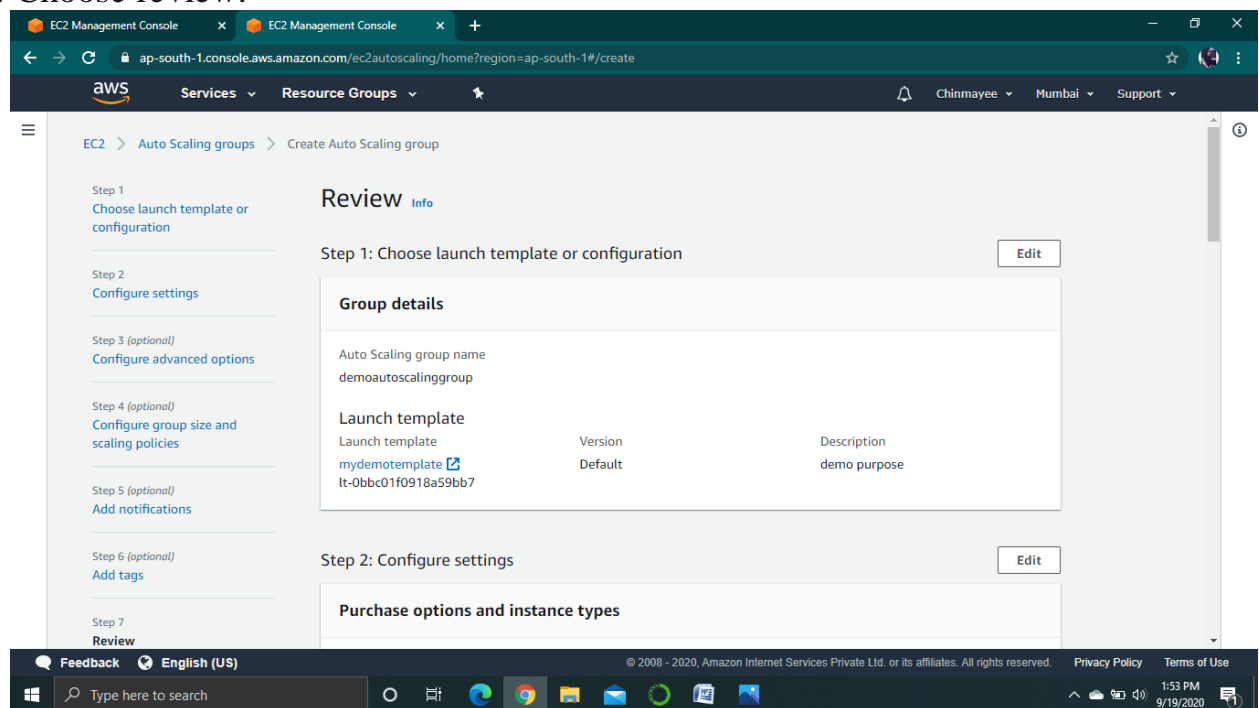


8. Configure the group size and scaling policy. Choose desired capacity as 1.

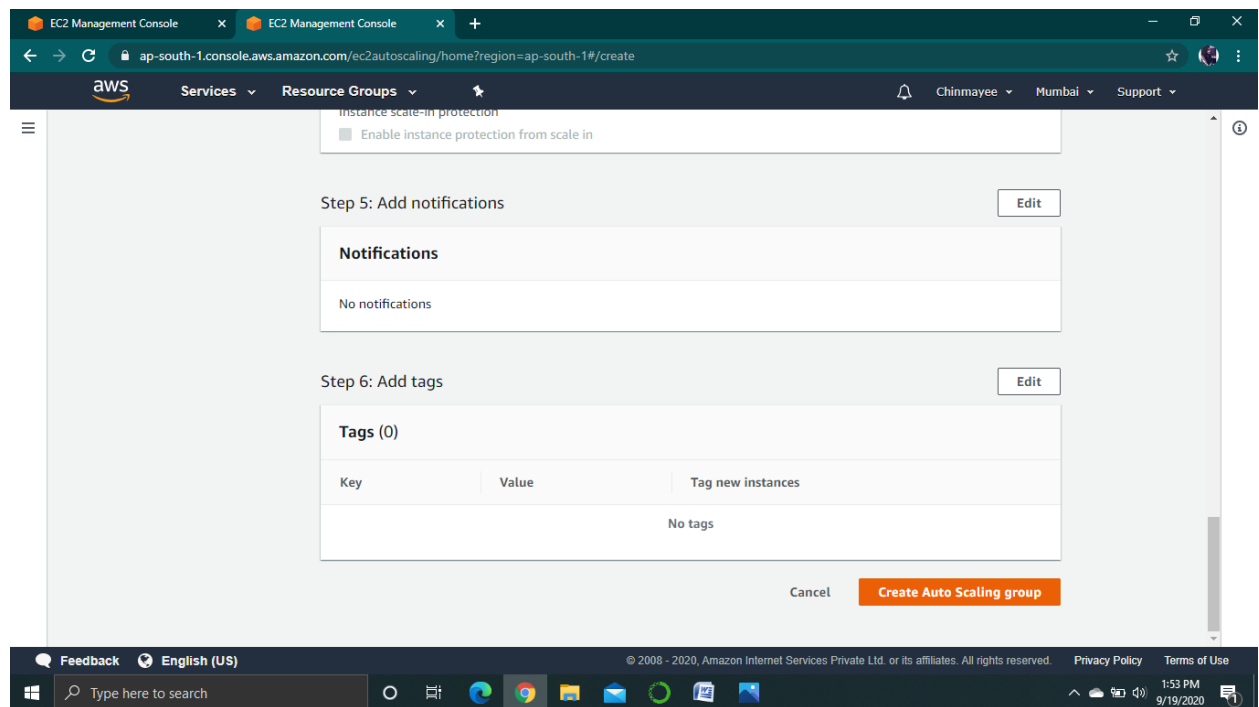


9. Notifications and tags can be added.

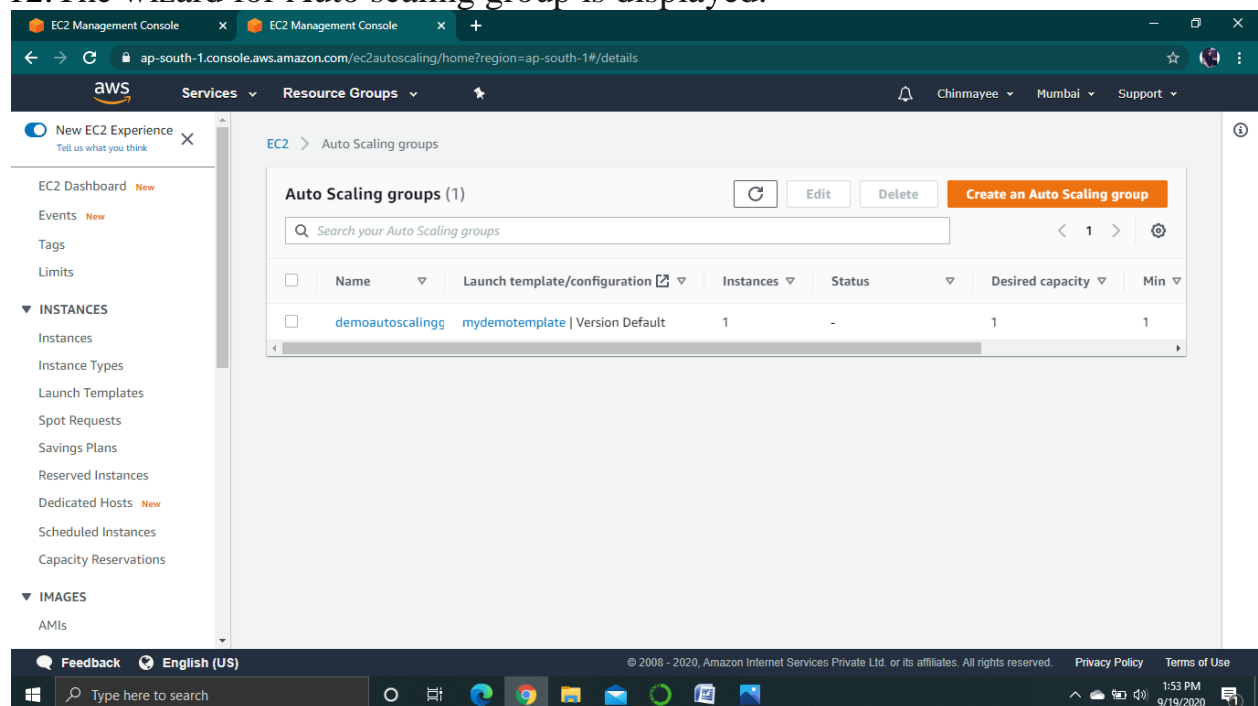
10. Choose review.



11. Choose Create Auto Scaling group.

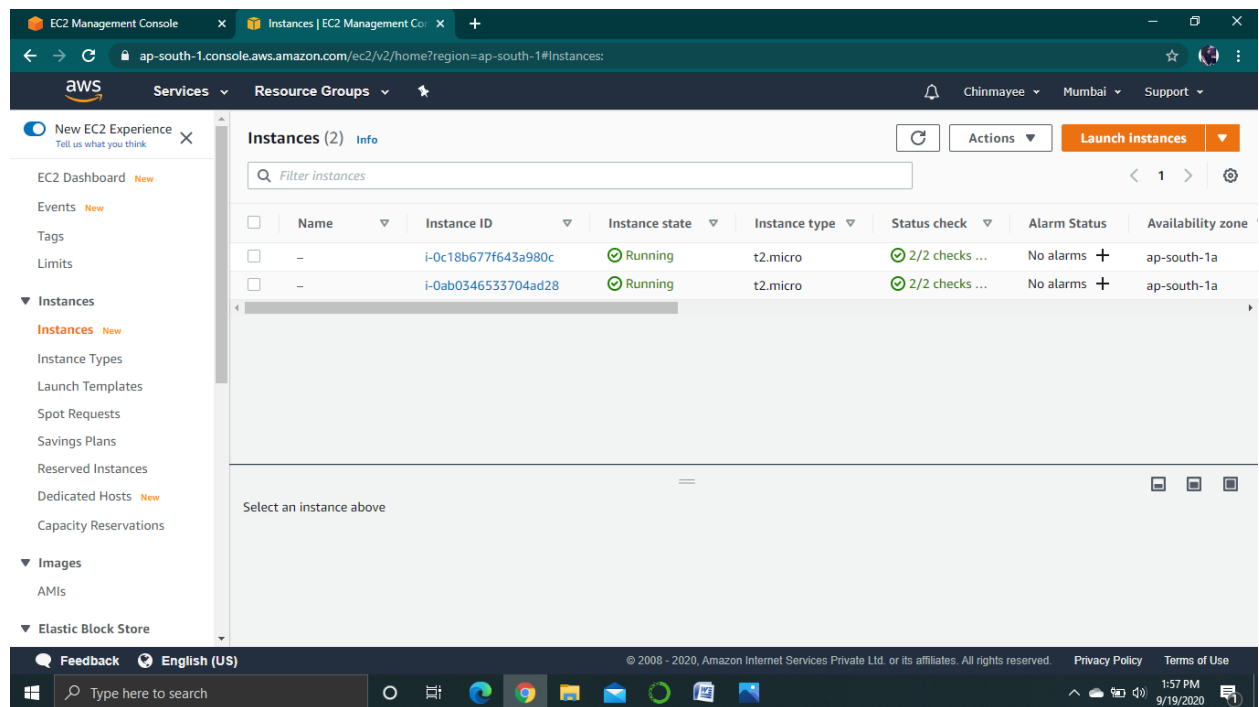


12.The wizard for Auto scaling group is displayed.



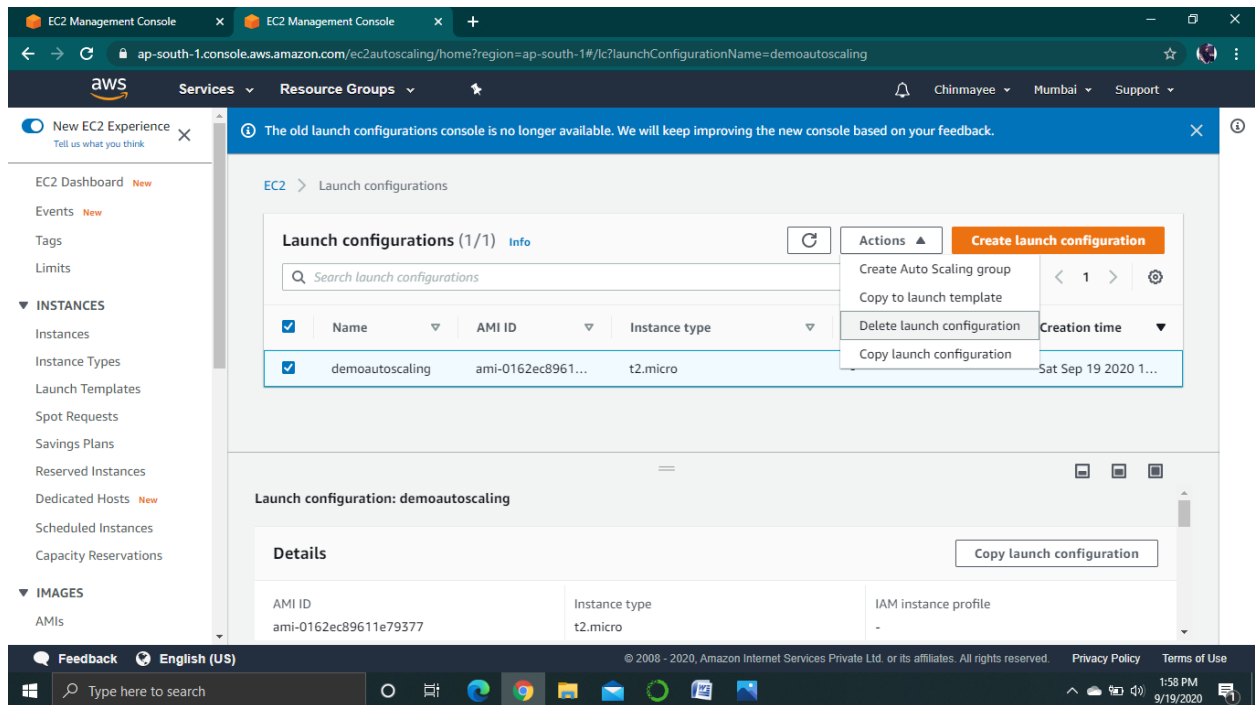
13.Verify whether Auto scaling group has created EC2 instance.

14.The instance has been launched successfully.

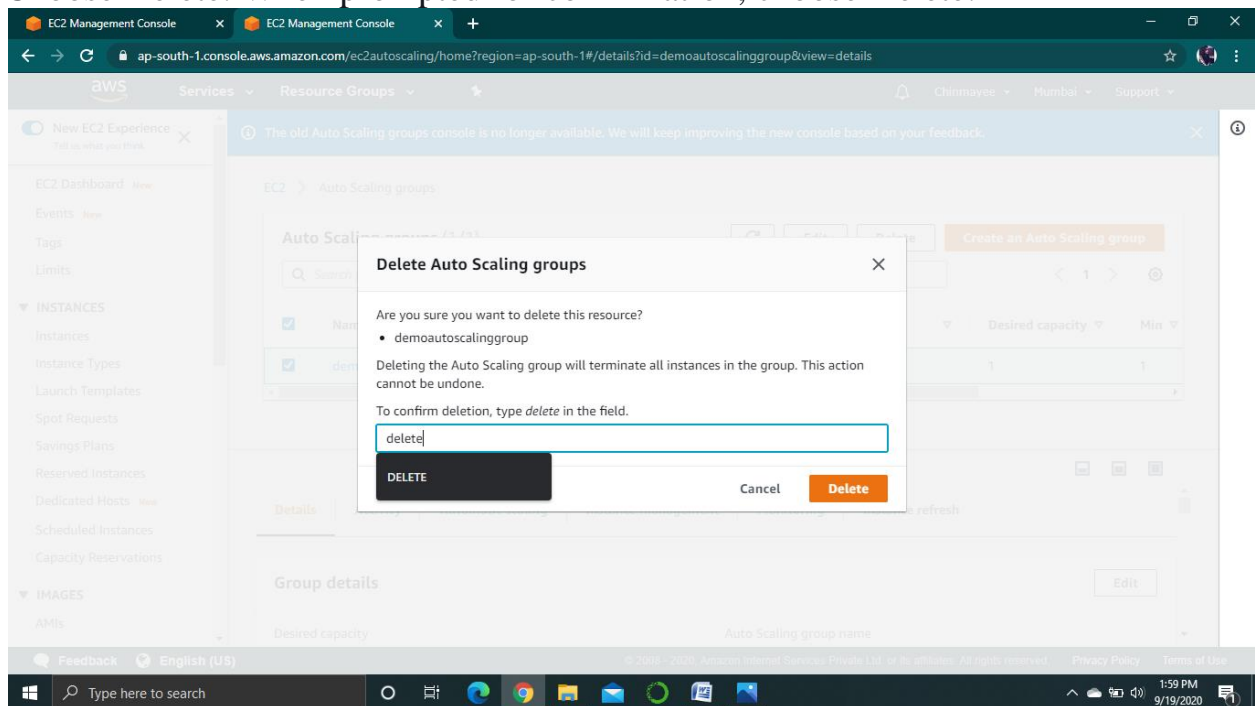


DETACHING EC2 INSTANCE FROM LOAD BALANCING

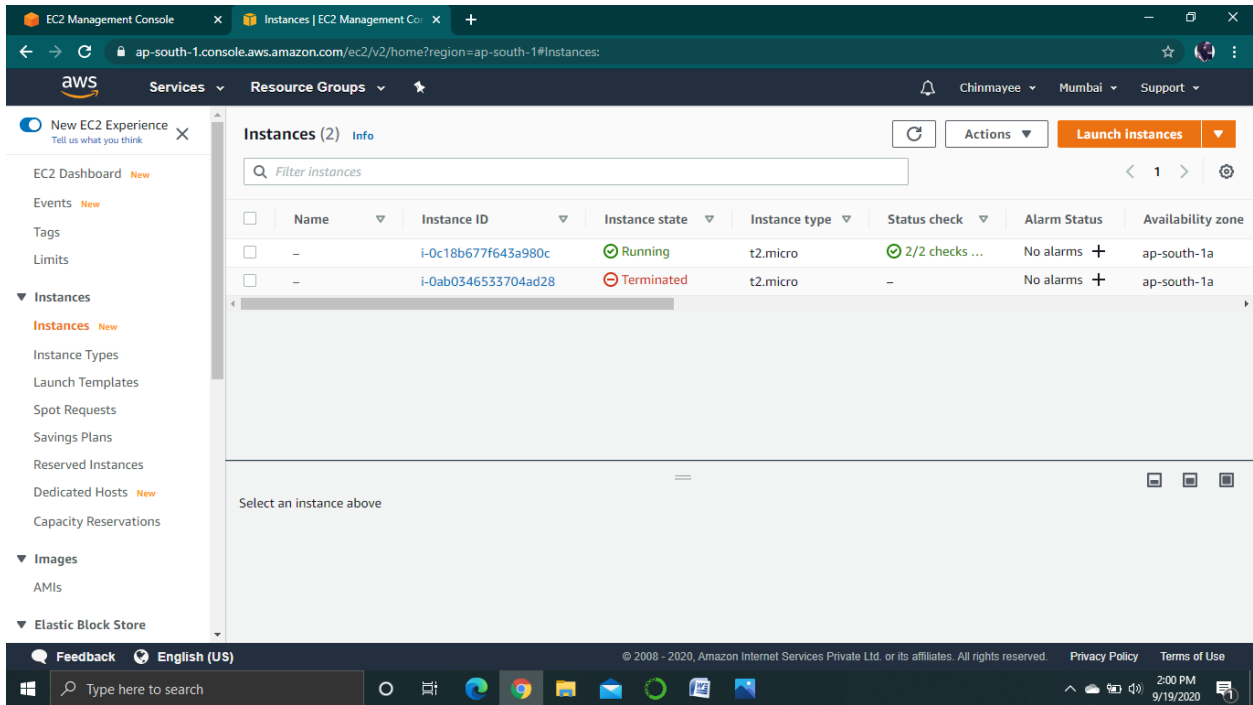
1. Open the Amazon EC2 console .
2. On the navigation pane, under AUTO SCALING, choose Auto Scaling Groups.
3. Select the check box next to your Auto Scaling group.



4. Choose Delete. When prompted for confirmation, choose Delete.

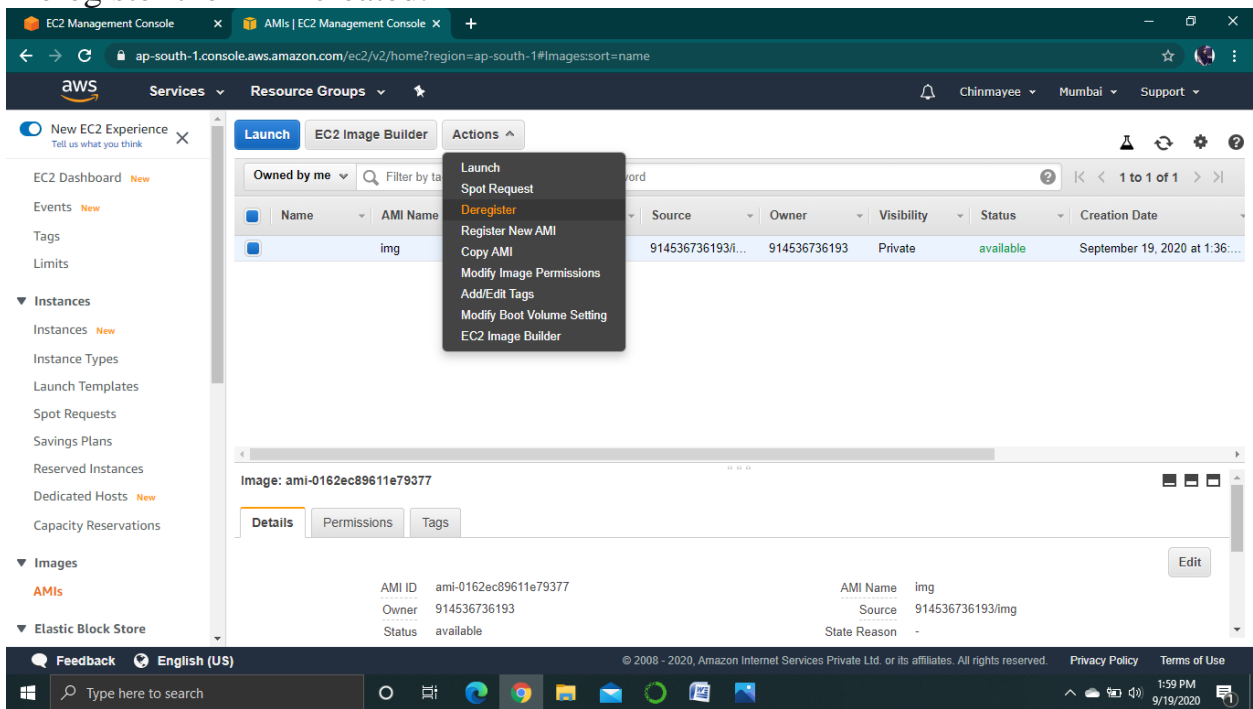


5. On the navigation pane, under AUTO SCALING, choose Launch Configuration.
6. Select the actions, and choose delete Launch Configuration.
7. Choose Delete. When prompted for confirmation, choose Delete.
8. The instances created will also get terminated.



9. Terminate the instance created for AMI.

10. Deregister the AMI created.



11. Select the load balancer you have created and select actions and then delete.

EC2 Management Console

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LoadBalancers:sort=loadBalancerName

ServicesResource Groups

ChinmayeeMumbaiSupport

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Network & Security

Security GroupsNew

Elastic IPsNew

Placement GroupsNew

Key PairsNew

Network Interfaces

Load Balancing

Load Balancers

Target GroupsNew

Auto Scaling

Launch Configurations

Auto Scaling Groups

Create Load Balancer

Actions

Filter by tags and attributes

Name	State	VPC ID	Availability Zones	Type
test-loadbalancer		vpc-f2667d9a	ap-south-1a, ap-south-...	classic

Edit health check

Edit subnets

Edit IP address type

Edit instances

Edit listeners

Edit security groups

Edit attributes

Delete

Load balancer: test-loadbalancer

DescriptionInstancesHealth checkListenersMonitoringTagsMigration

Basic Configuration

Name	test-loadbalancer	Creation time	September 19, 2020 at 1:48:05 PM UTC+5:30
------	-------------------	---------------	---

FeedbackEnglish (US)

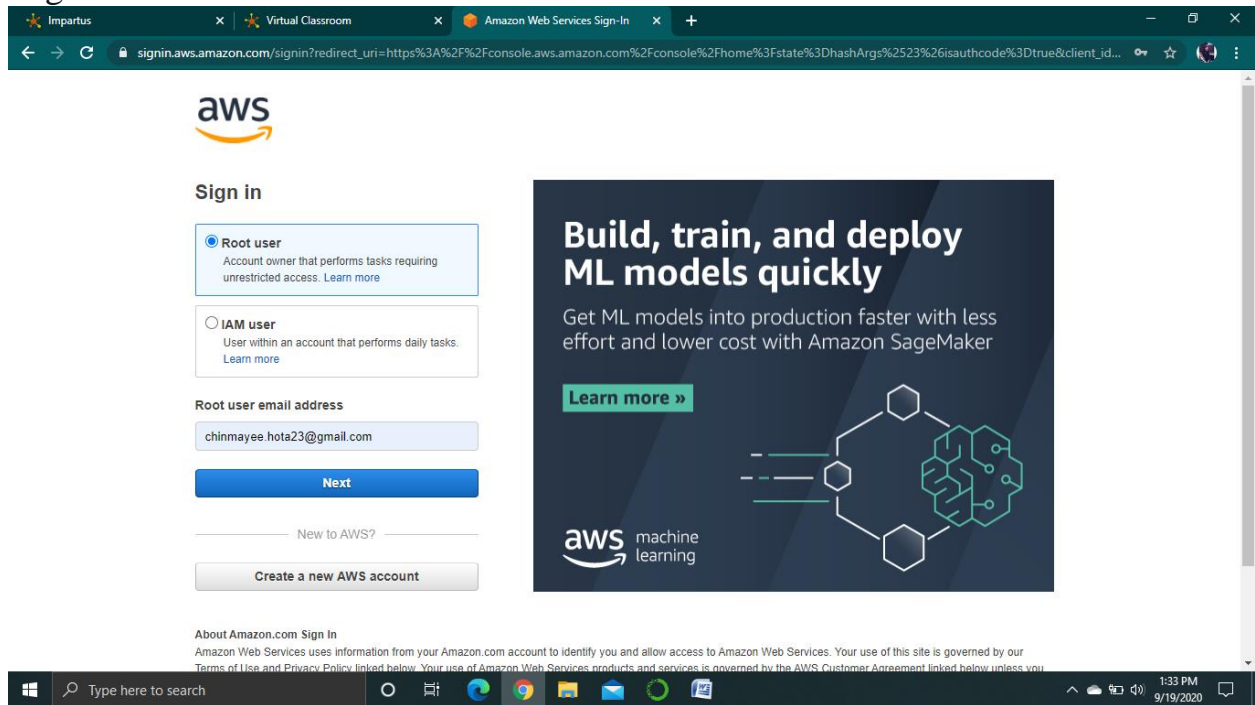
© 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved. Privacy PolicyTerms of Use

Type here to search

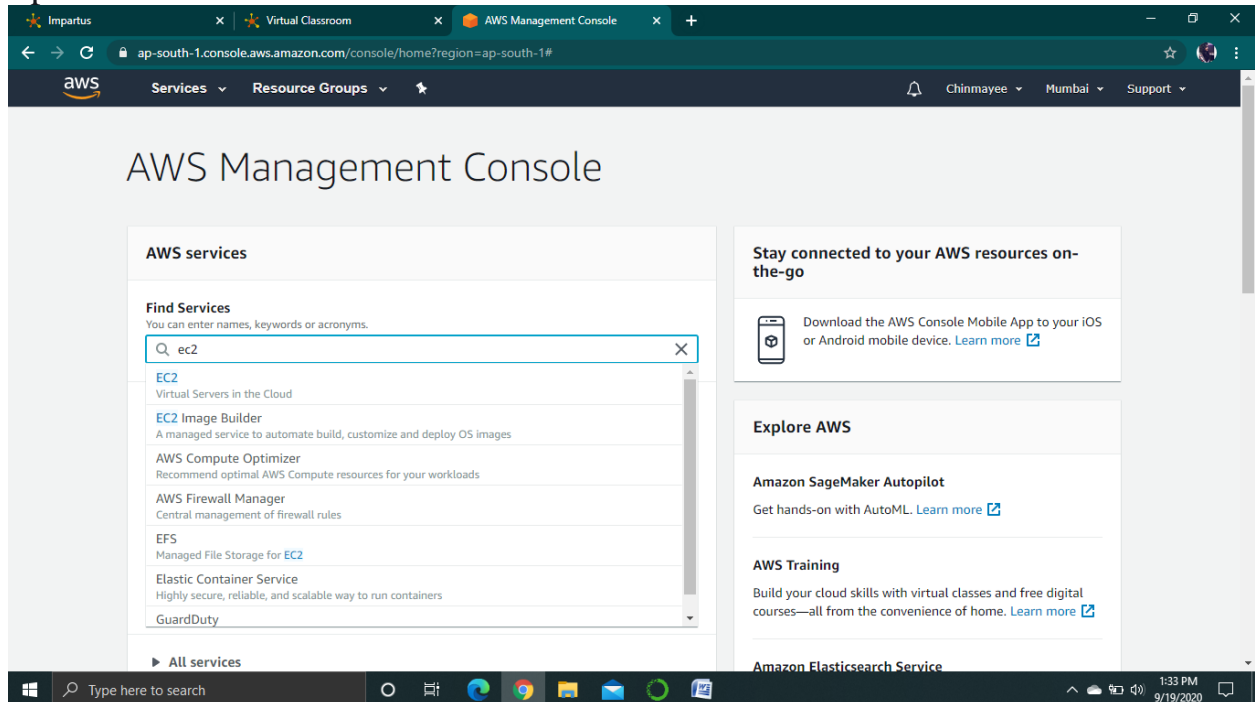
1:59 PM9/19/2020

IMPLEMENTING ELASTIC LOAD BALANCING

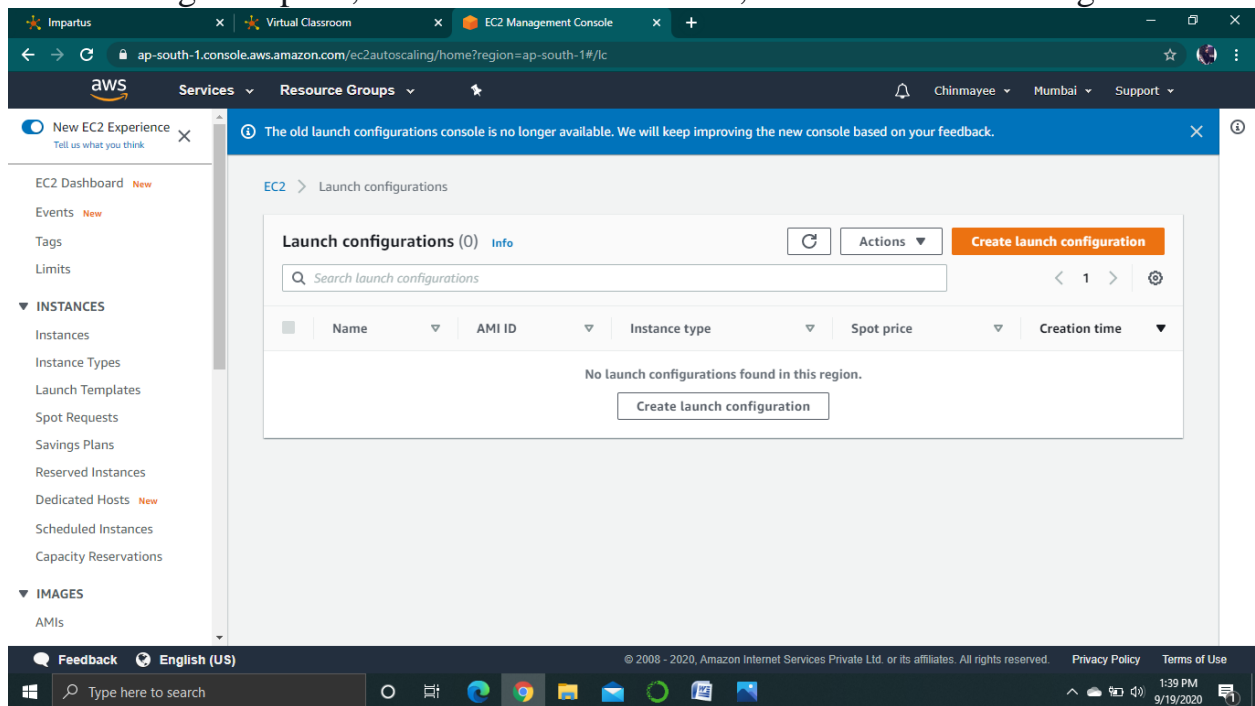
1. Login to AWS console.



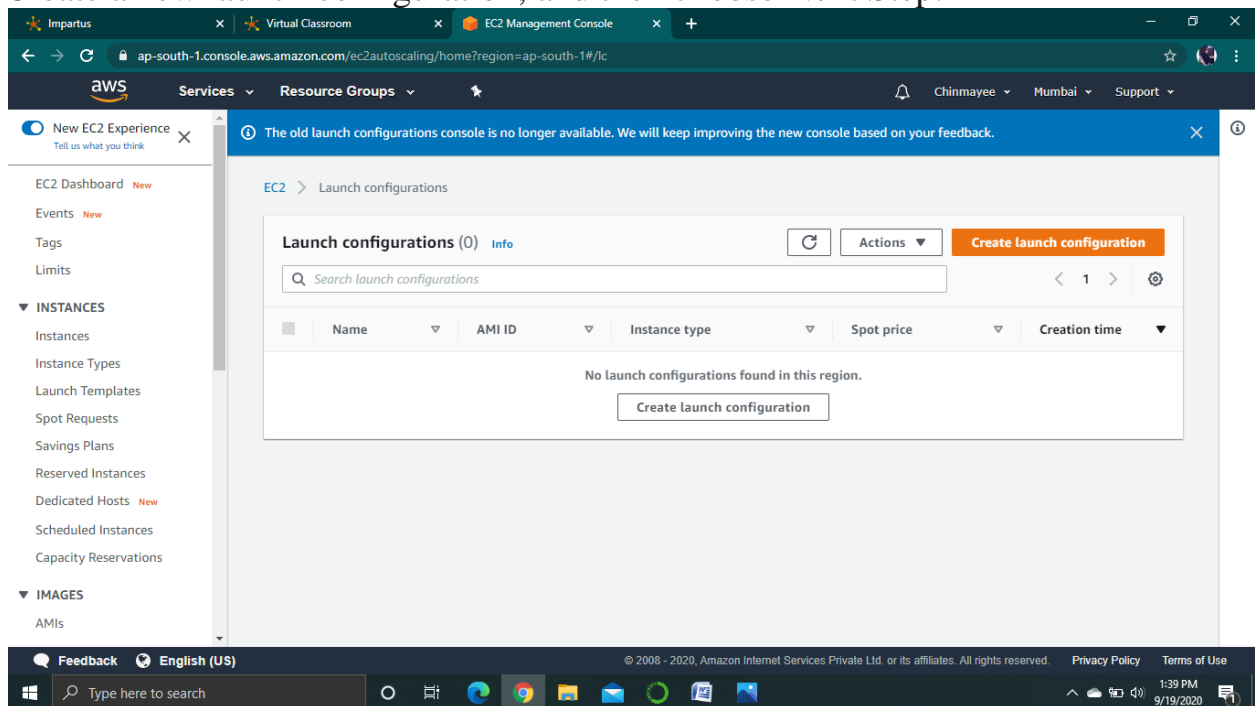
2. Open the Amazon EC2 service.



3. On the navigation pane, under AUTO SCALING, choose Launch Configurations.



4. Create a new launch configuration, and then choose Next Step.

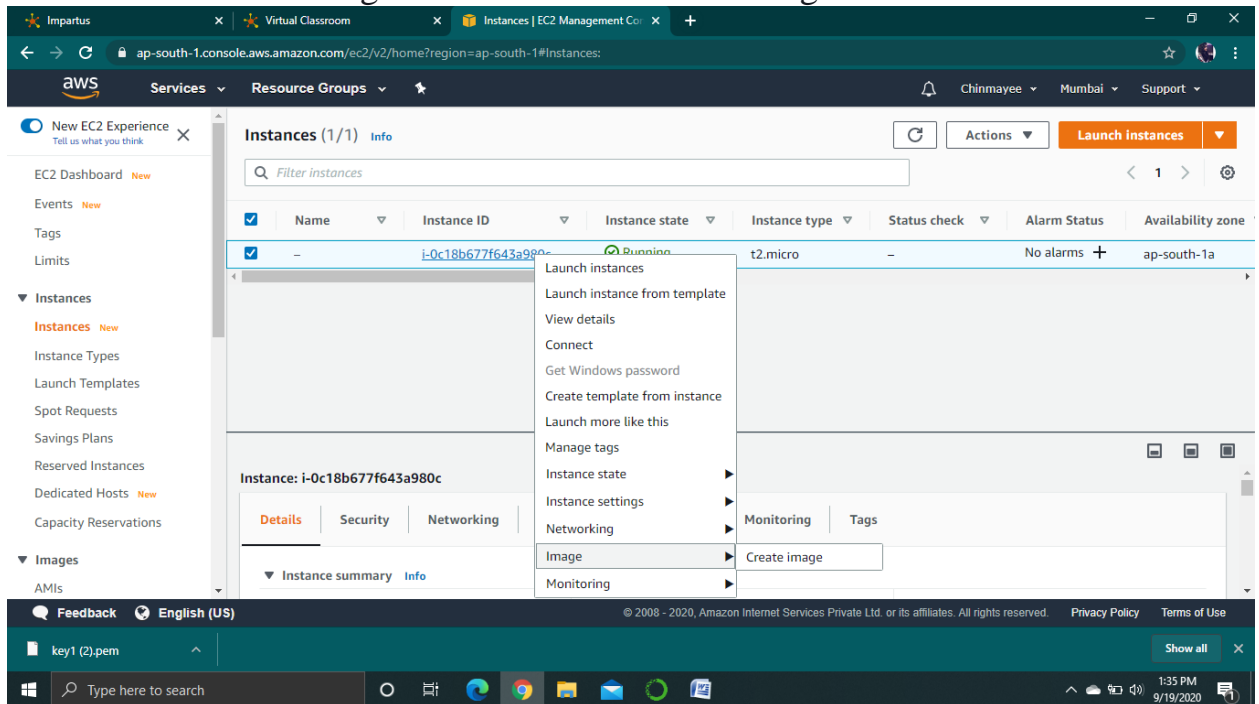


5. Configure all the details.

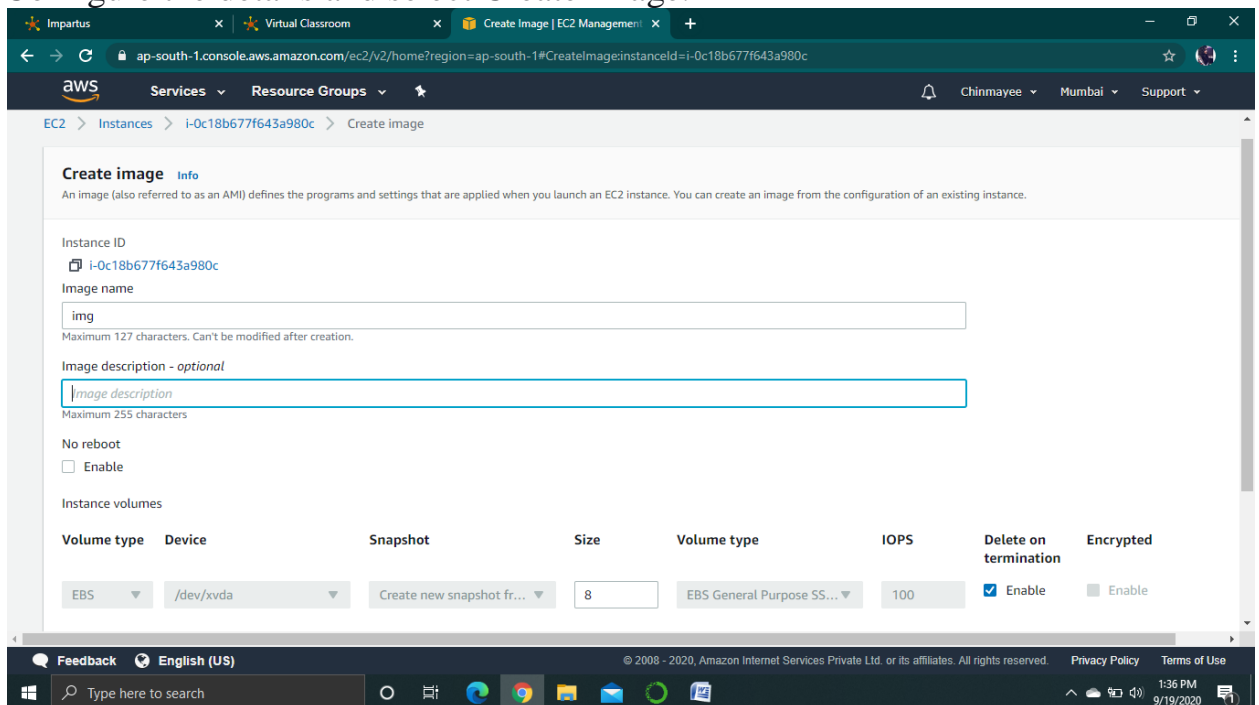
6. For selecting a free eligible AMI.

- Launch an EC2 instance.

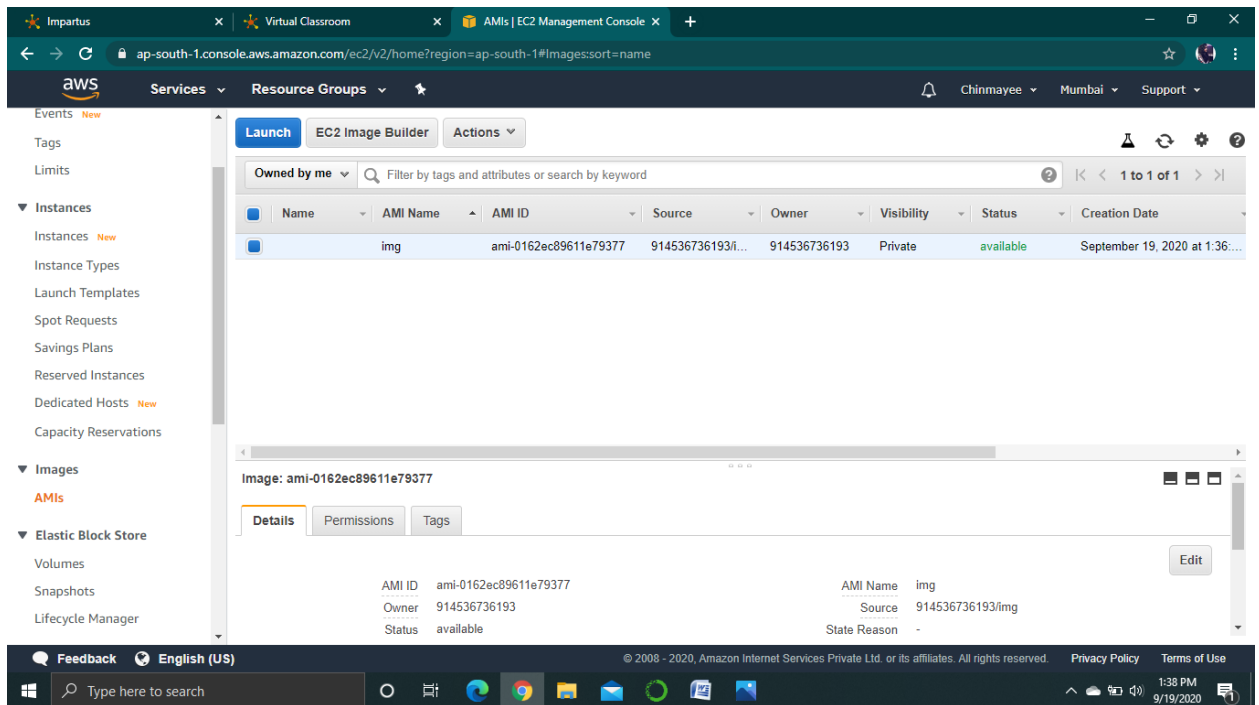
- Select the EC2 instance and choose actions.
- From actions select Image and then select Create Image.



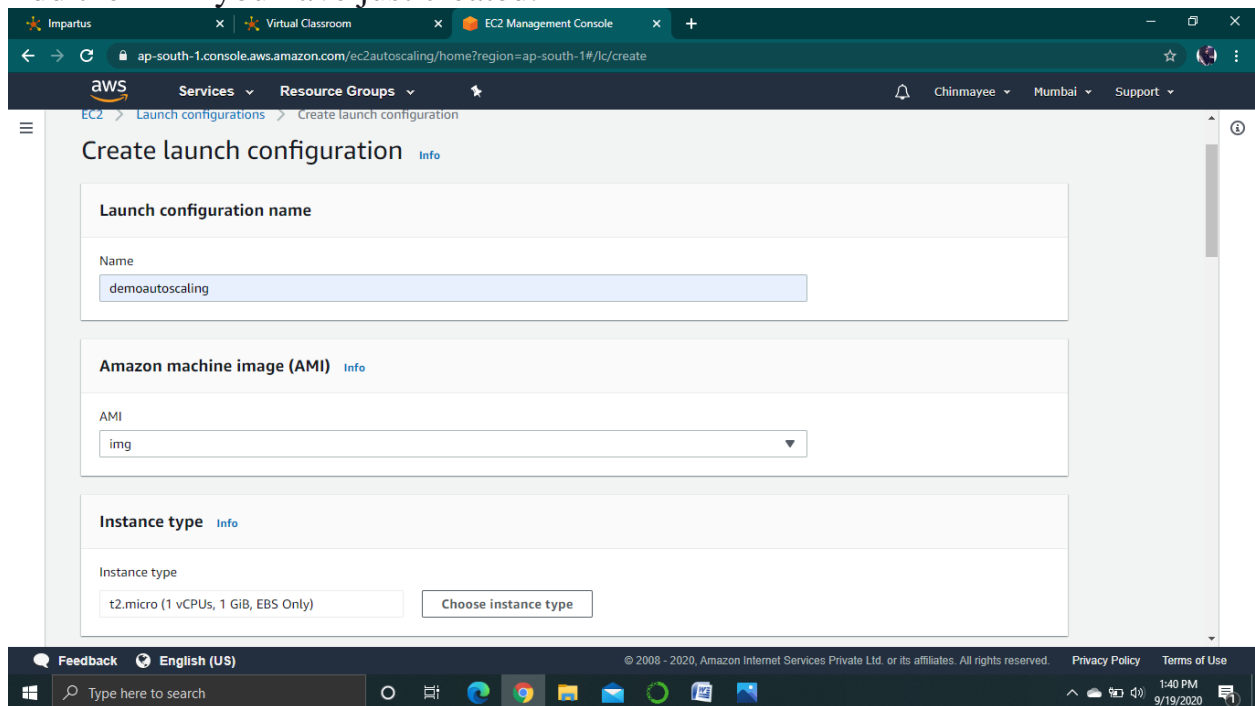
- Configure the details and select Create Image.



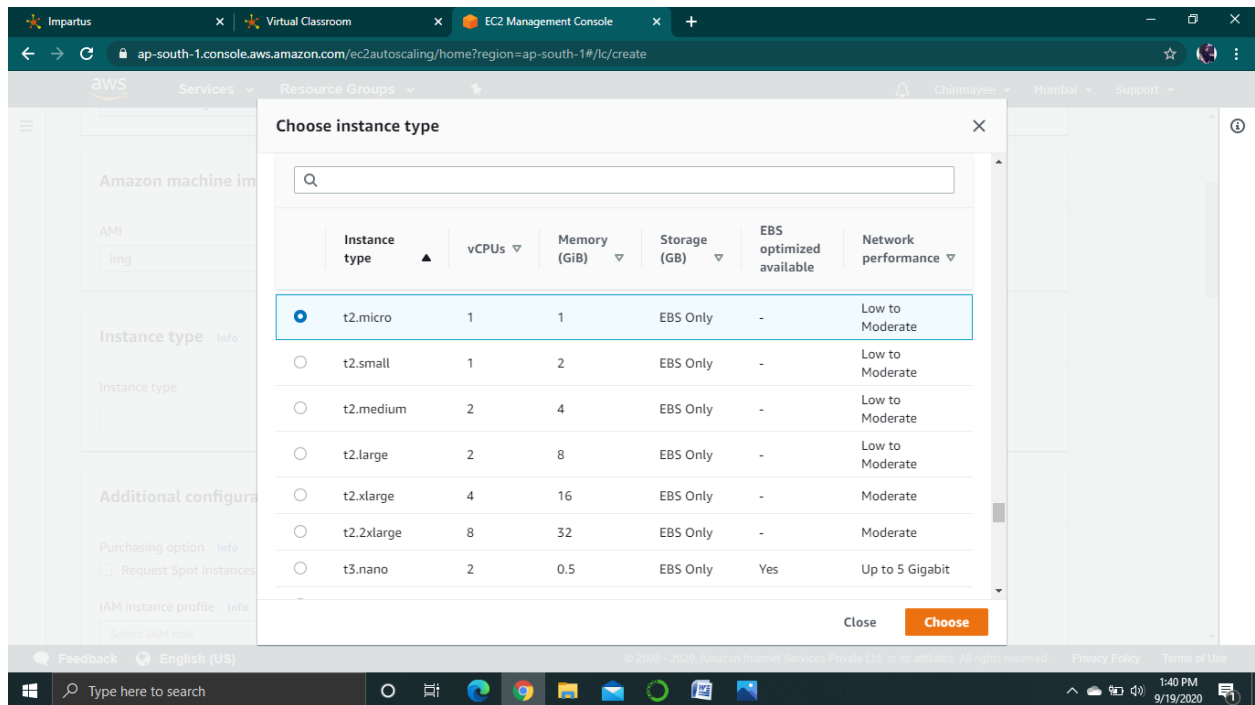
- From the AMI dashboard check the status.



7. Add the AMI you have just created.

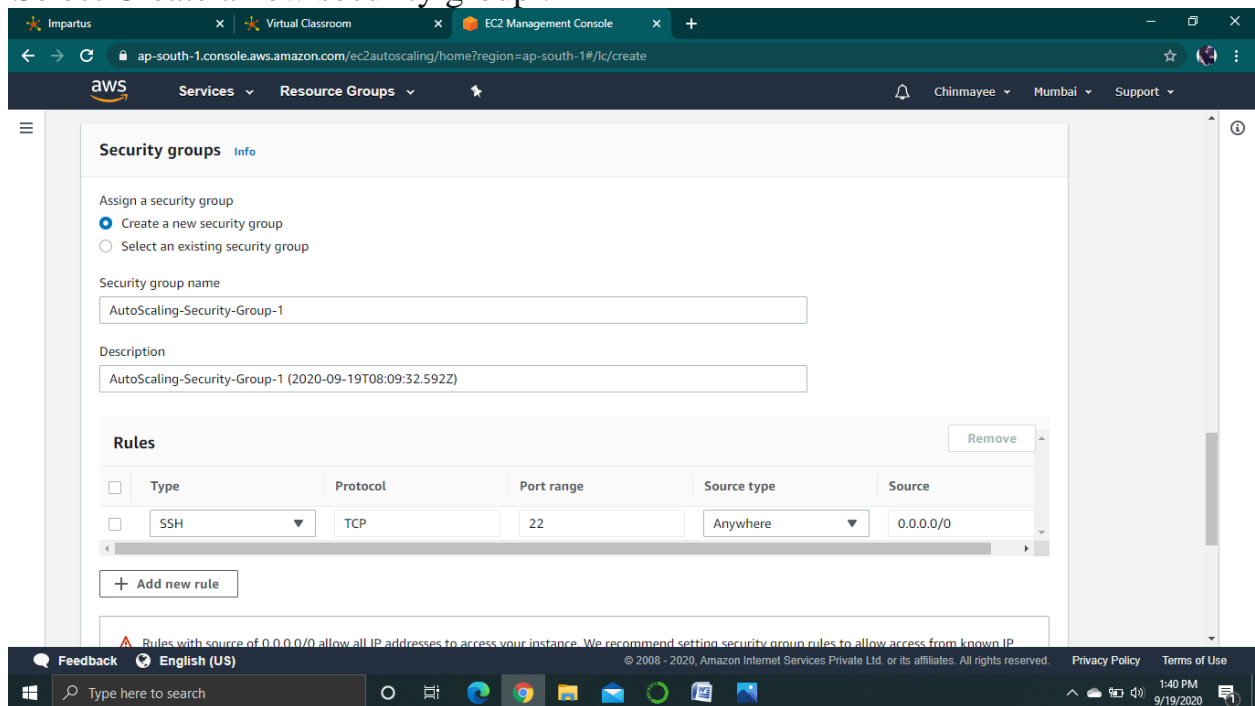


8. For the Choose Instance Type step, select a t2.micro instance.



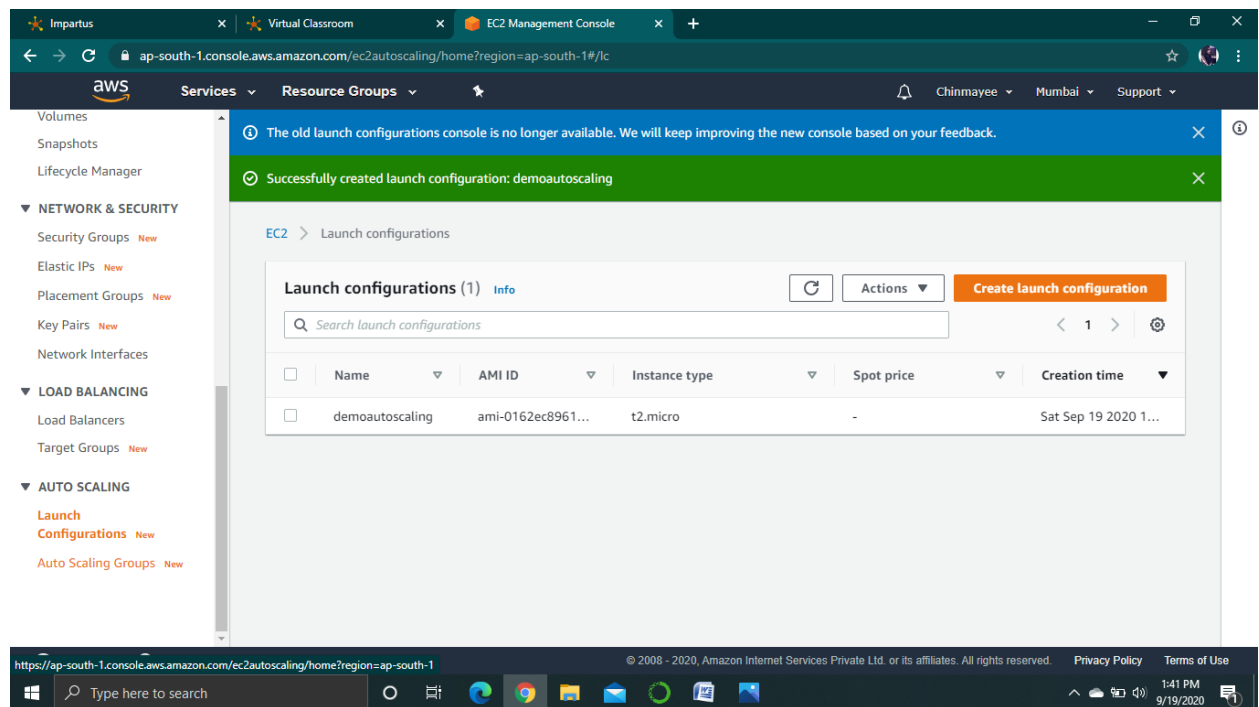
9. Choose Next: Configure details.

10. Select Create a new security group .



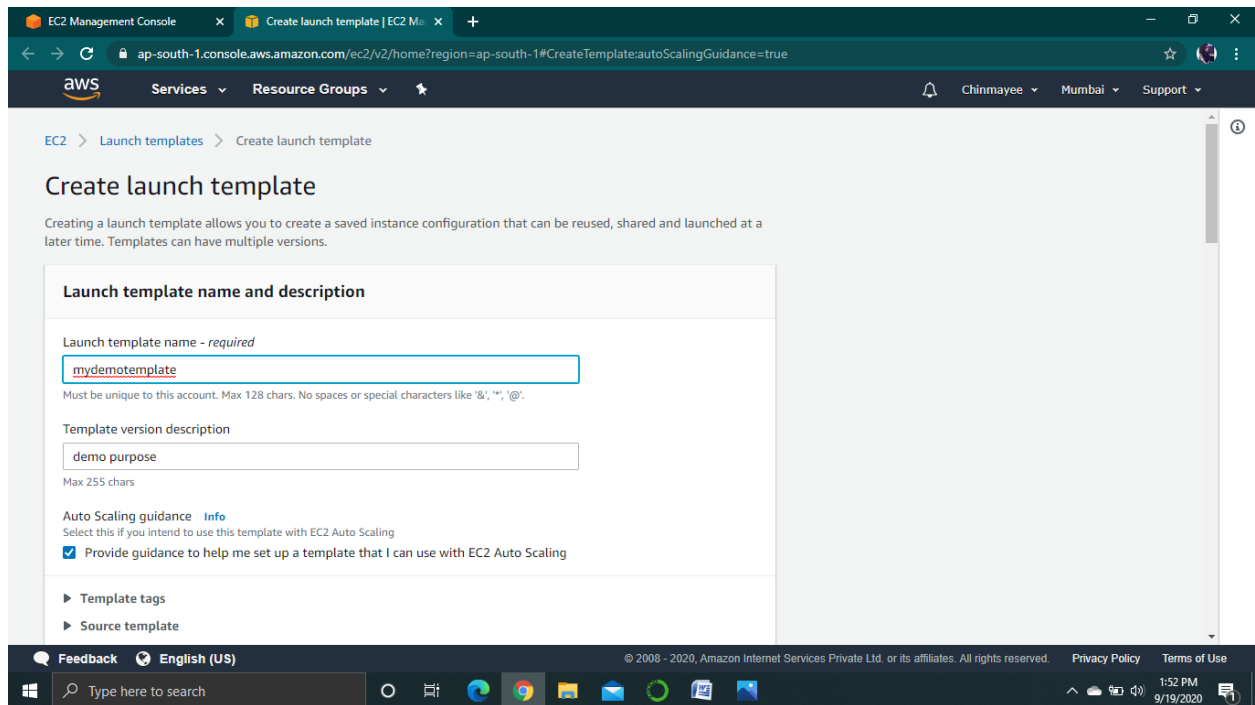
11. Choose Create launch configuration.

12. The wizard to Launch a Configuration is displayed.

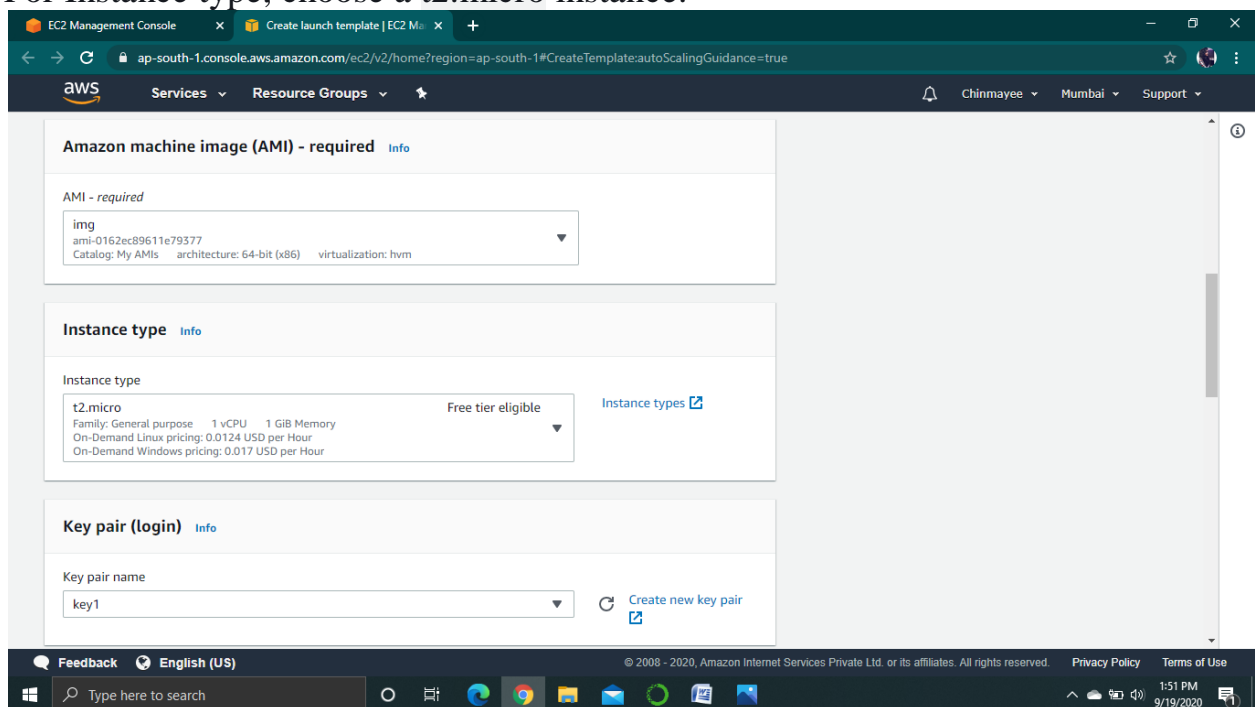


CONFIGURE A LAUNCH TEMPLATE

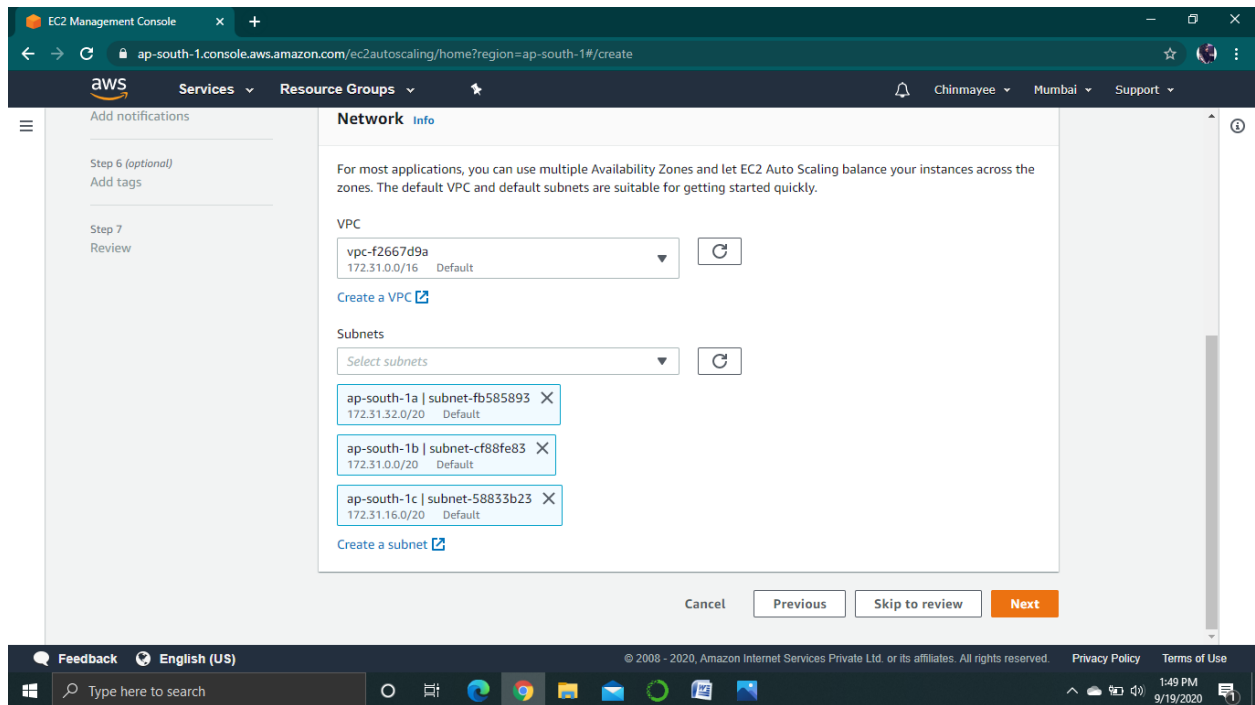
1. Login to AWS console.
2. Open the Amazon EC2 service.
3. On the navigation pane, under INSTANCES, choose Launch Templates.
4. Choose Create launch template.



5. Configure all the details.
6. For AMI ID, choose a version of AMI you have created.
7. For Instance type, choose a t2.micro instance.



8. For Key pair name, choose an existing key pair.
9. Leave Network type set to VPC.



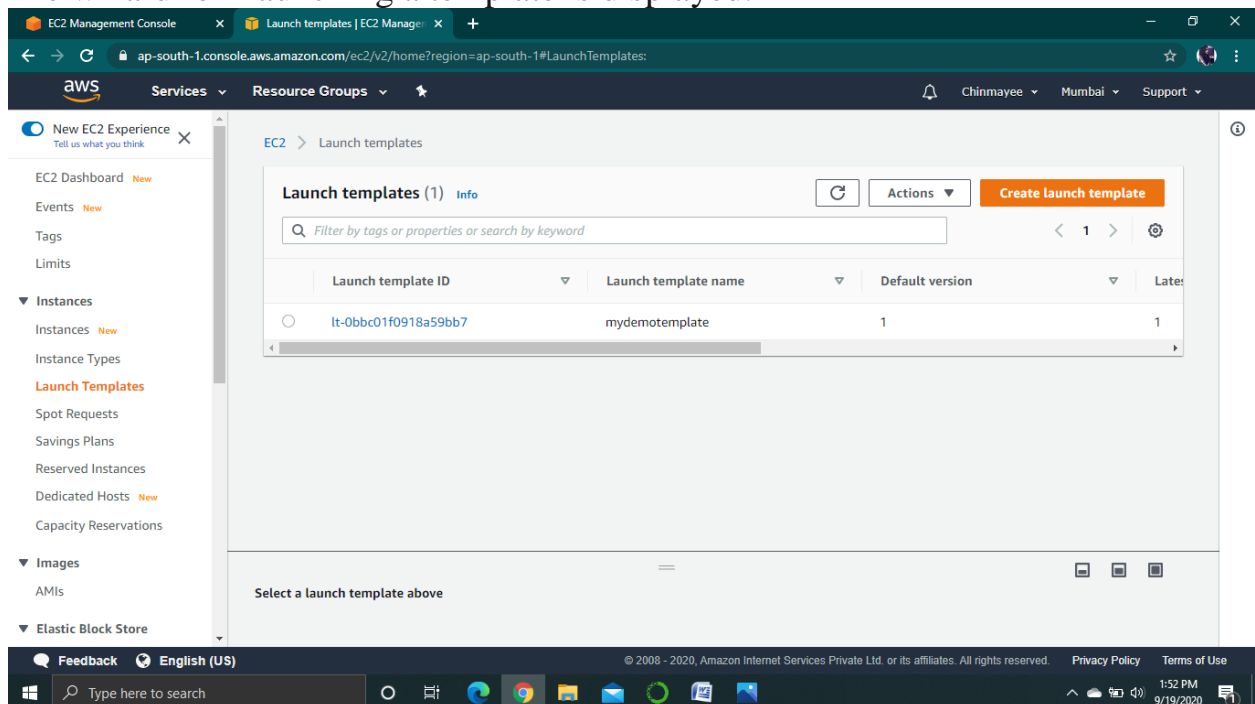
10. For Security Groups, specify the default security group for the VPC.

11. Configure default settings for EBS.

12. Leave Network Interfaces empty.

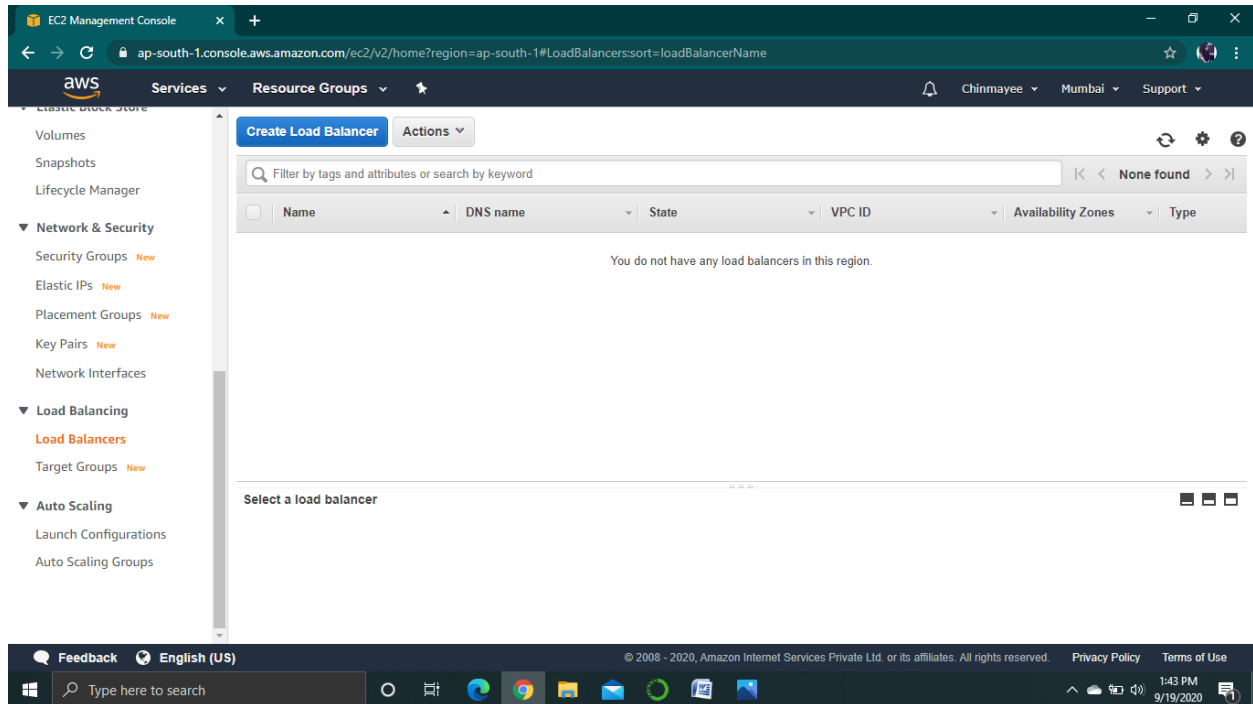
13. Scroll down and choose Create launch template.

14. The wizard for Launching a template is displayed.

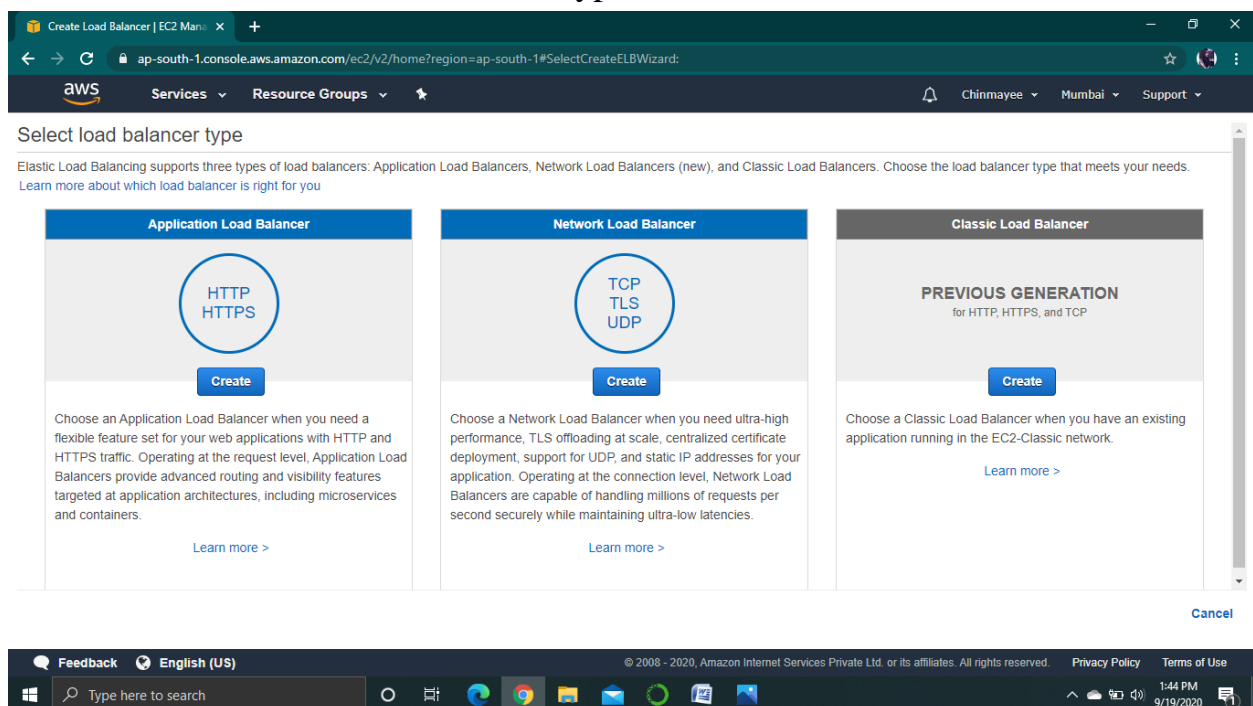


CONFIGURE LOAD BALANCING

1. Sign into AWS console and select EC2 service.
2. On the navigation pane, under LOAD BALANCING, choose Load Balancers and then choose create load balancer.



3. Choose Classic Load Balancer as the type of load balancer.



4. Define the Load Balancer and configure all its details.

Create Load Balancer | EC2 Man... x +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#CreateELBWizard:

Services Resource Groups

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 1: Define Load Balancer

Basic Configuration

This wizard will walk you through setting up a new load balancer. Begin by giving your new load balancer a unique name so that you can identify it from other load balancers you might create. You will also need to configure ports and protocols for your load balancer. Traffic from your clients can be routed from any load balancer port to any port on your EC2 instances. By default, we've configured your load balancer with a standard web server on port 80.

Load Balancer name:

Create LB inside:

Create an internal load balancer: ☐ (what's this?)

Enable advanced VPC configuration: ☐

Listener Configuration:

Load Balancer Protocol	Load Balancer Port	Instance Protocol	Instance Port
HTTP	80	HTTP	80

Add

Cancel Next: Assign Security Groups

Feedback English (US)

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Type here to search

1:47 PM 9/19/2020

5. Assign the default security groups and configure security settings.

Create Load Balancer | EC2 Man... x +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#CreateELBWizard:

Services Resource Groups

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 2: Assign Security Groups

You have selected the option of having your Elastic Load Balancer inside of a VPC, which allows you to assign security groups to your load balancer. Please select the security groups to assign to this load balancer. This can be changed at any time.

Assign a security group: ☐ Create a new security group ☒ Select an existing security group

Filter: VPC security groups

Security Group ID	Name	Description
<input type="checkbox"/> sg-0a2a1c3d6c5875173	AutoScaling-Security-Group-1	AutoScaling-Security-Group-1 (2020-09-19T08:09:32.592Z)
<input checked="" type="checkbox"/> sg-0ca7ee69	default	default VPC security group
<input type="checkbox"/> sg-0c7a0b1db06b58f2d	launch-wizard-1	launch-wizard-1 created 2020-09-19T13:34:19.150+05:30
<input type="checkbox"/> sg-0a027b5526435aec7	WordPress Certified by Bitnami and Automattic-5-5-0 on Debian 10-AutogenByAWSMP-1	This security group was generated by AWS Marketplace and is based on recommended s

Cancel Previous Next: Configure Security Settings

Feedback English (US)

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Type here to search

1:47 PM 9/19/2020

6. Configure the health check.

Create Load Balancer | EC2 Man... x +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#CreateELBWizard:

Services Resource Groups

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 4: Configure Health Check

Your load balancer will automatically perform health checks on your EC2 instances and only route traffic to instances that pass the health check. If an instance fails the health check, it is automatically removed from the load balancer. Customize the health check to meet your specific needs.

Ping Protocol: HTTP
 Ping Port: 80
 Ping Path: /index.html

Advanced Details

Response Timeout: 5 seconds
 Interval: 30 seconds
 Unhealthy threshold: 2
 Healthy threshold: 10

Cancel Previous Next: Add EC2 Instances

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Type here to search

7. Add the EC2 instance.

Create Load Balancer | EC2 Man... x +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#CreateELBWizard:

Services Resource Groups

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 5: Add EC2 Instances

The table below lists all your running EC2 Instances. Check the boxes in the Select column to add those instances to this load balancer.

VPC vpc-f2667d9a (172.31.0.0/16)

Instance	Name	State	Security groups	Zone	Subnet ID	Subnet CIDR
<input checked="" type="checkbox"/>	i-0c18b677f643a980c	running	launch-wizard-1	ap-south-1a	subnet-fb585893	172.31.32.0/20

Availability Zone Distribution

1 instance in ap-south-1a

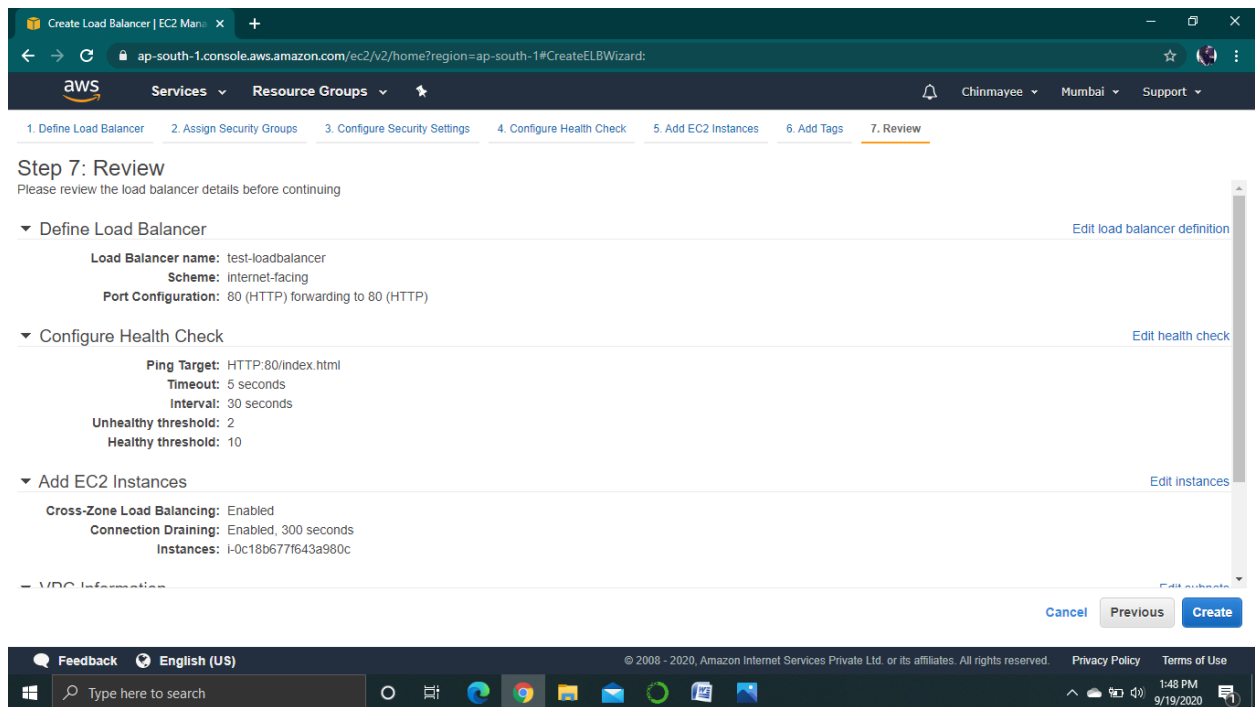
☒ Enable Cross-Zone Load Balancing
☒ Enable Connection Draining 300 seconds

Cancel Previous Next: Add Tags

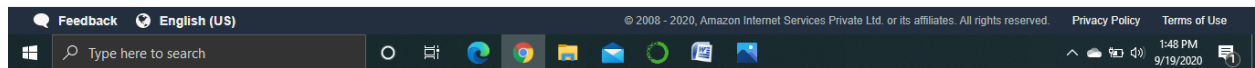
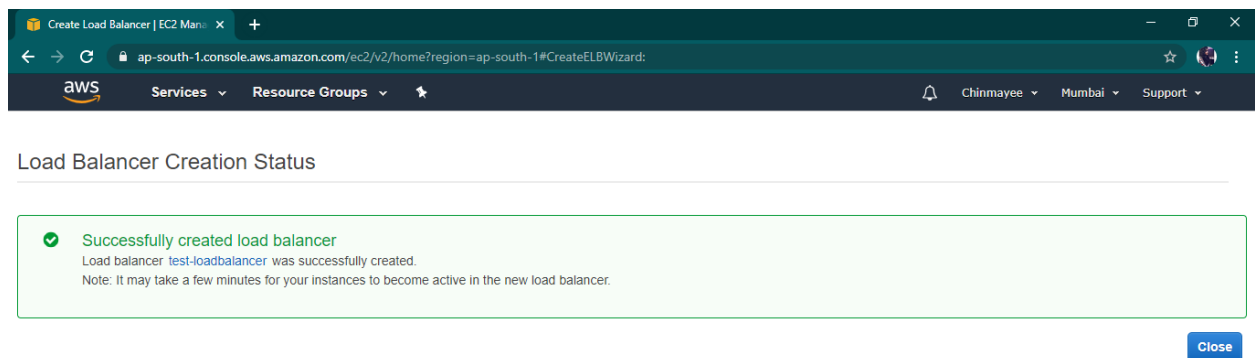
Feedback English (US) © 2008 - 2020, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved. Privacy Policy Terms of Use

Type here to search

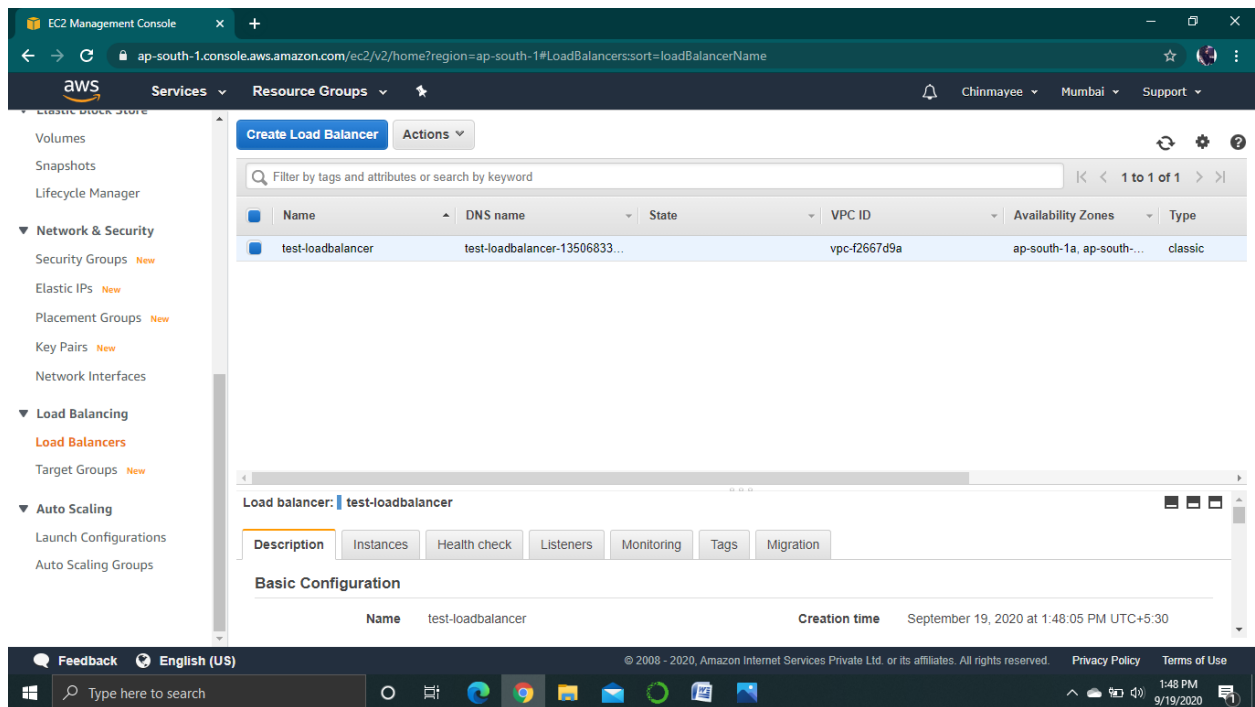
8. Add tags and click on review.



9. Check the status of the load balancer.

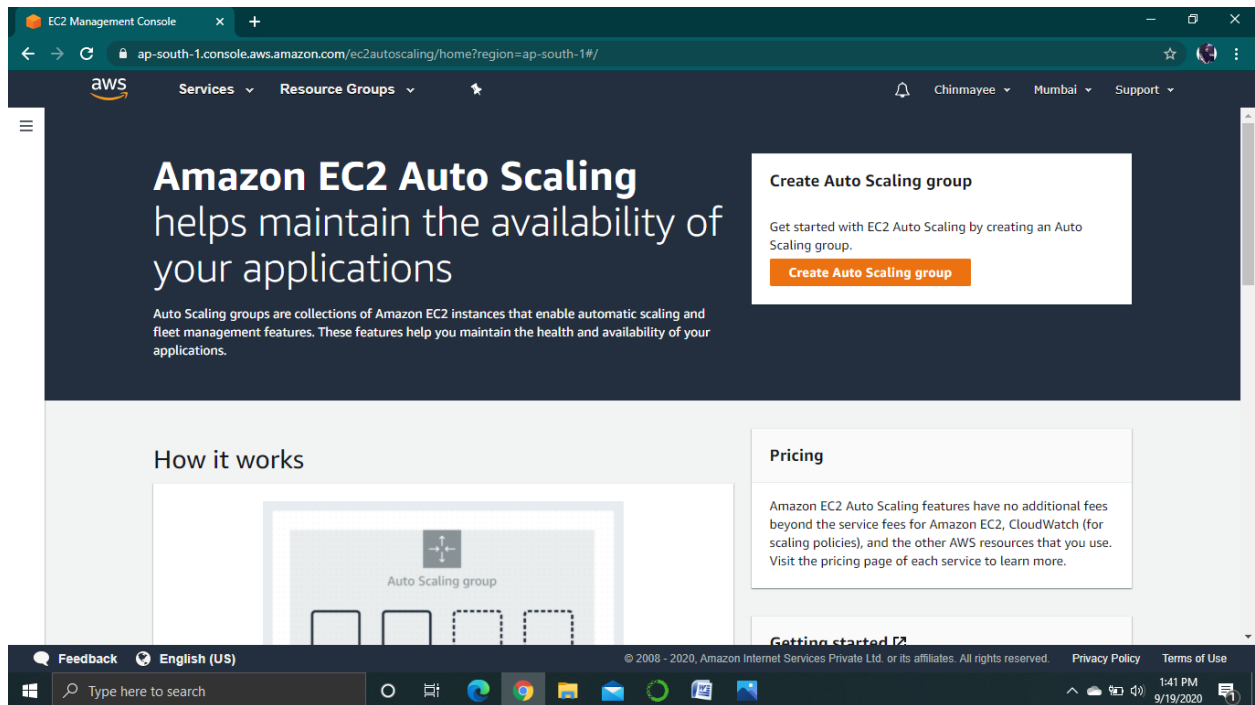


10. The load balancer created will be displayed on the dashboard.

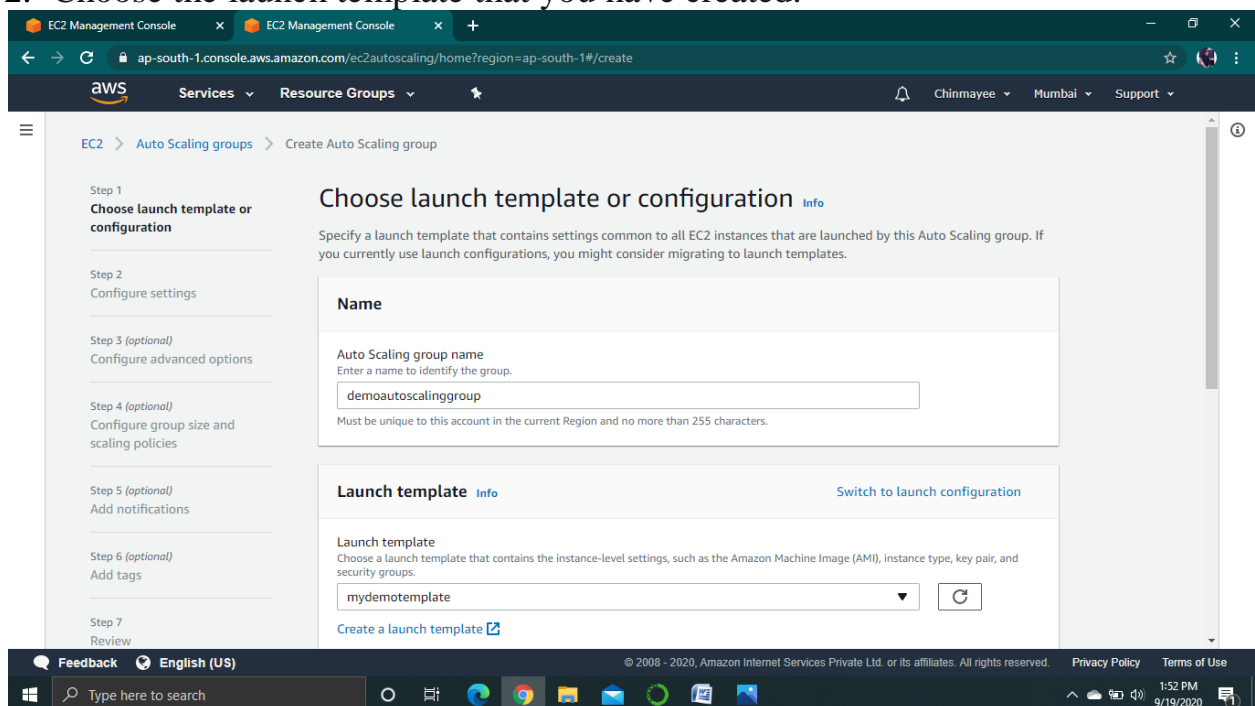


IMPLEMENTING AUTO SCALING GROUP

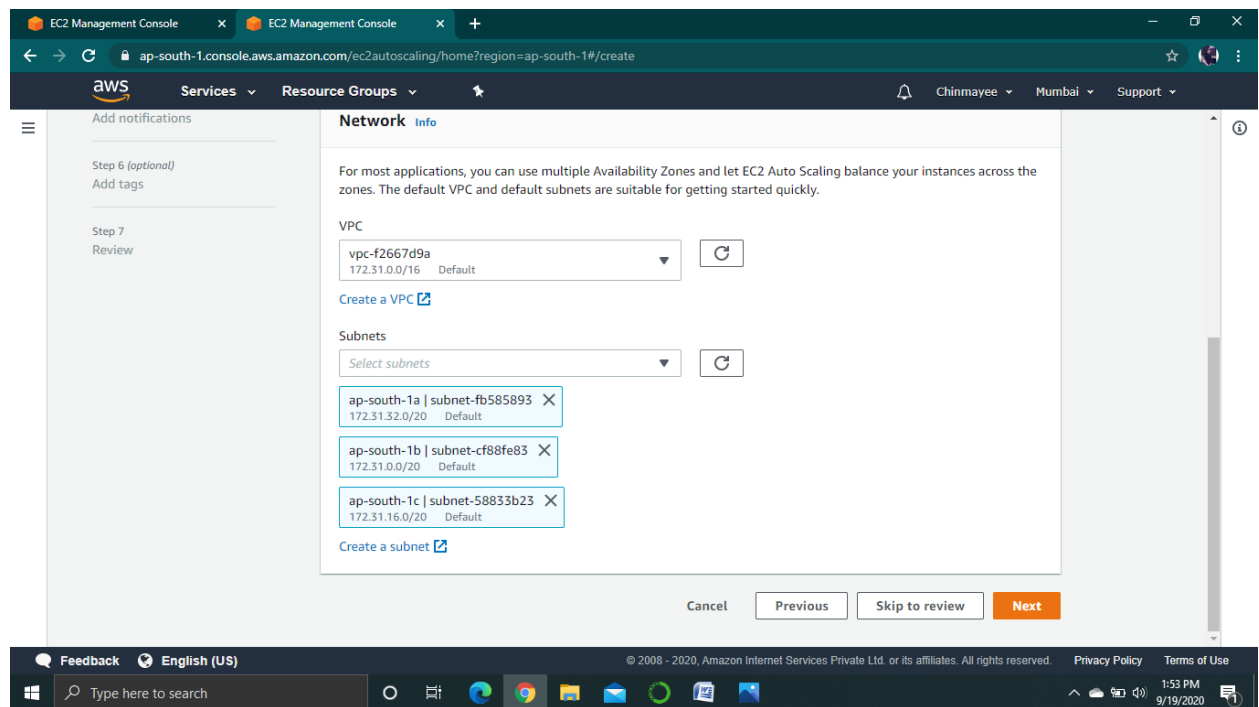
1. From EC2 dashboard, on the Auto Scaling groups page, choose Create an Auto Scaling group.



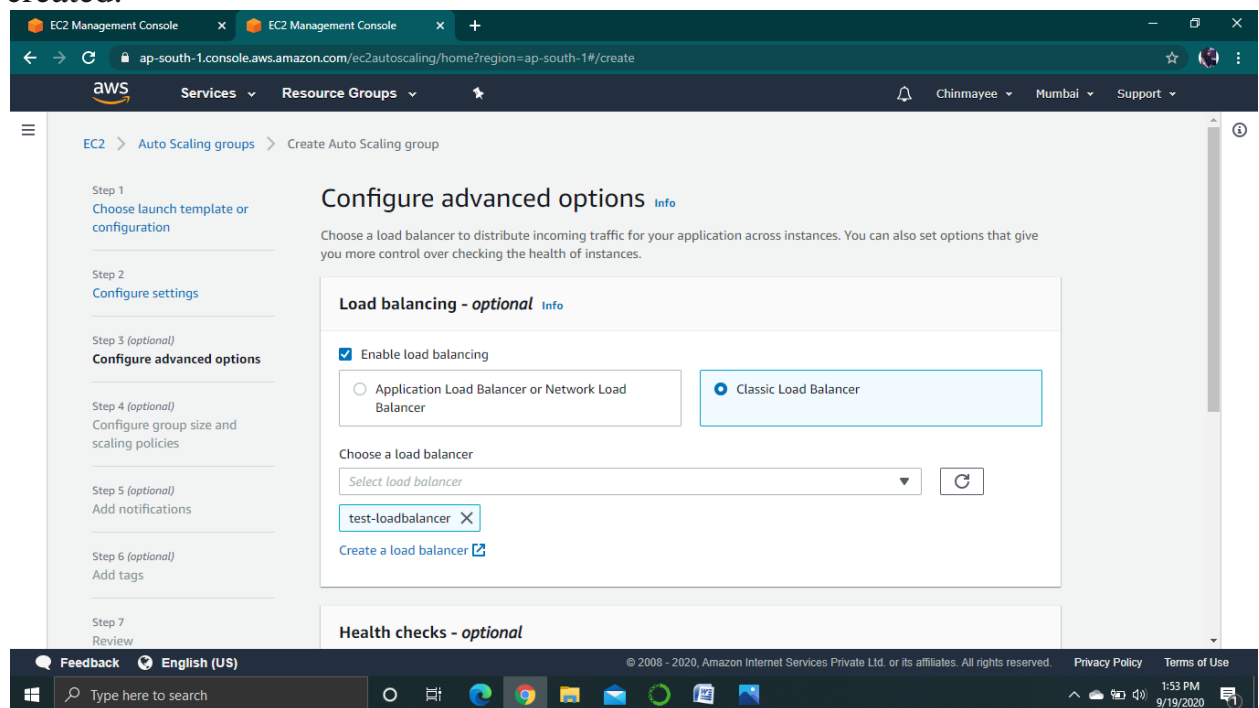
2. Choose the launch template that you have created.



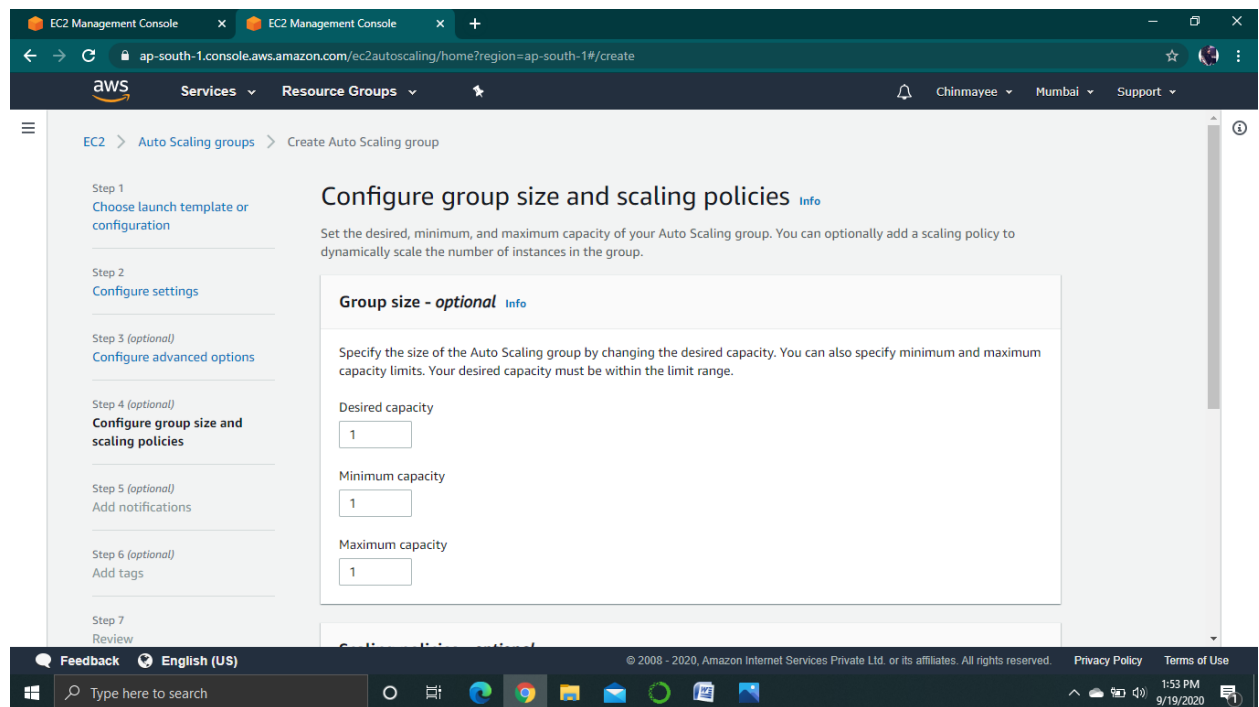
3. Choose the default version of the launch template to use when scaling out.
4. Choose Next.
5. Keep Network set to the default VPC for your chosen AWS Region.
6. For **Subnet**, choose a subnet from each Availability Zone that you want to include.



7. Enable the load balancing option and select the load balancer which you have created.

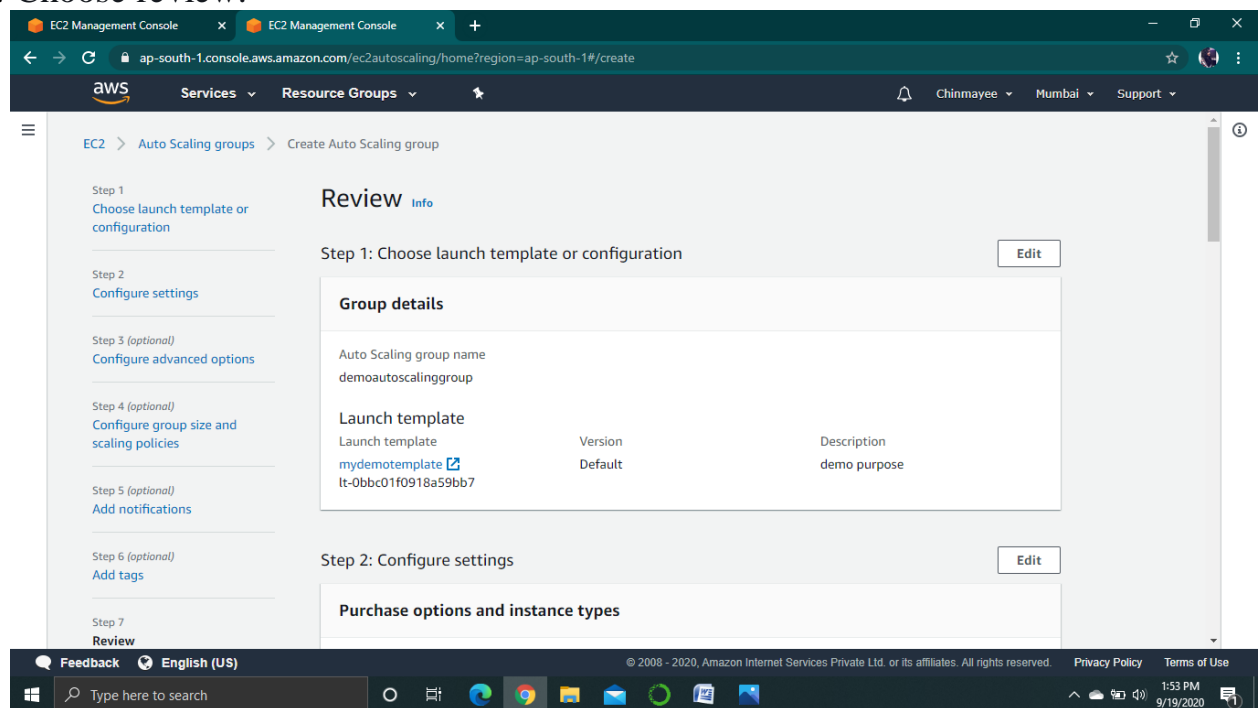


8. Configure the group size and scaling policy. Choose desired capacity as 1.

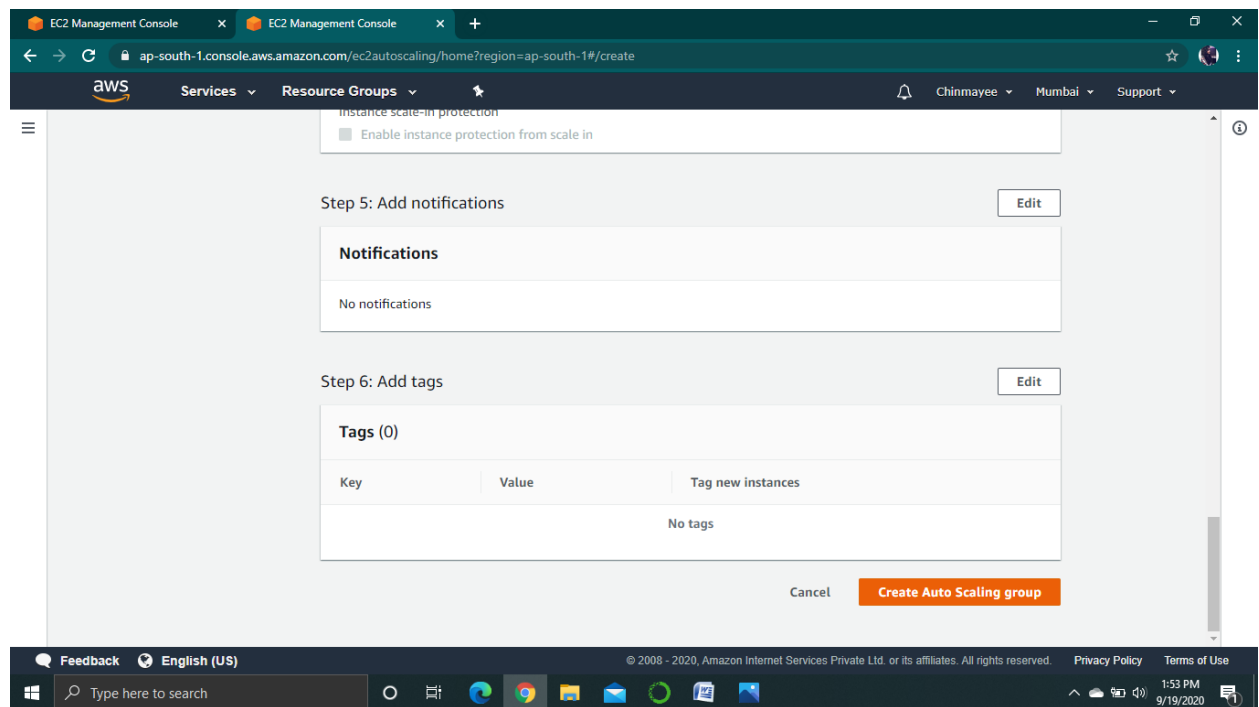


9. Notifications and tags can be added.

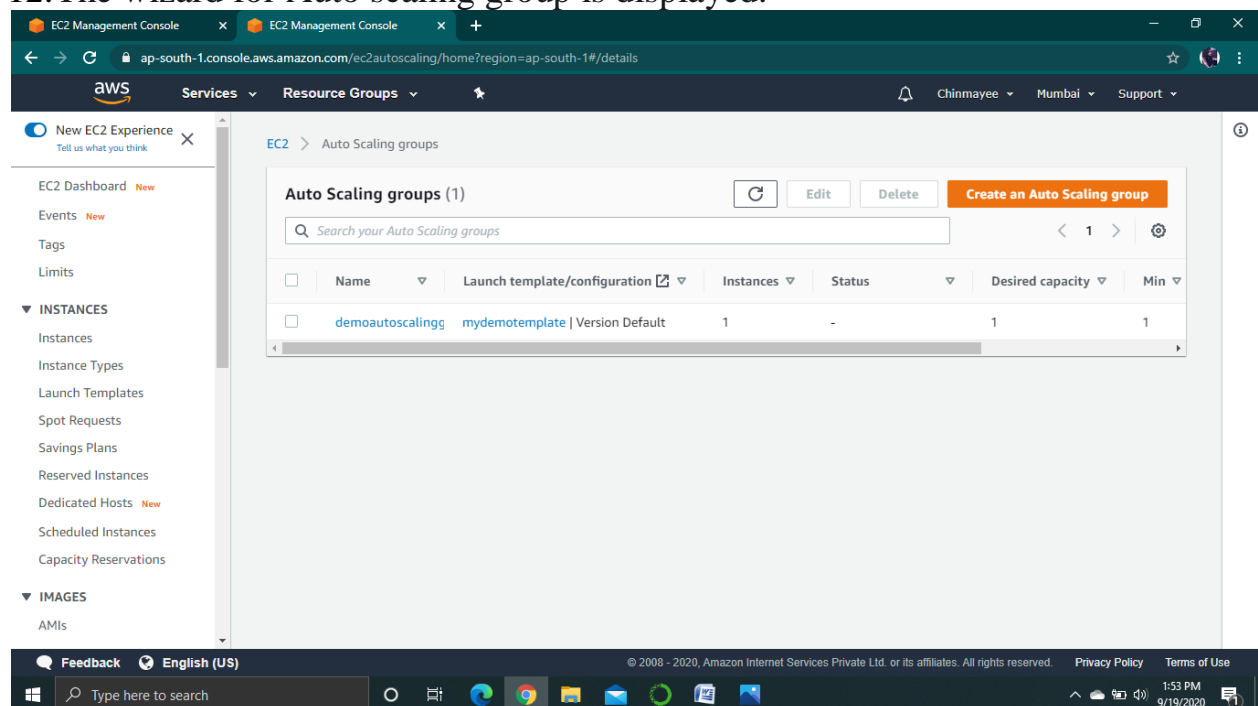
10. Choose review.



11. Choose Create Auto Scaling group.

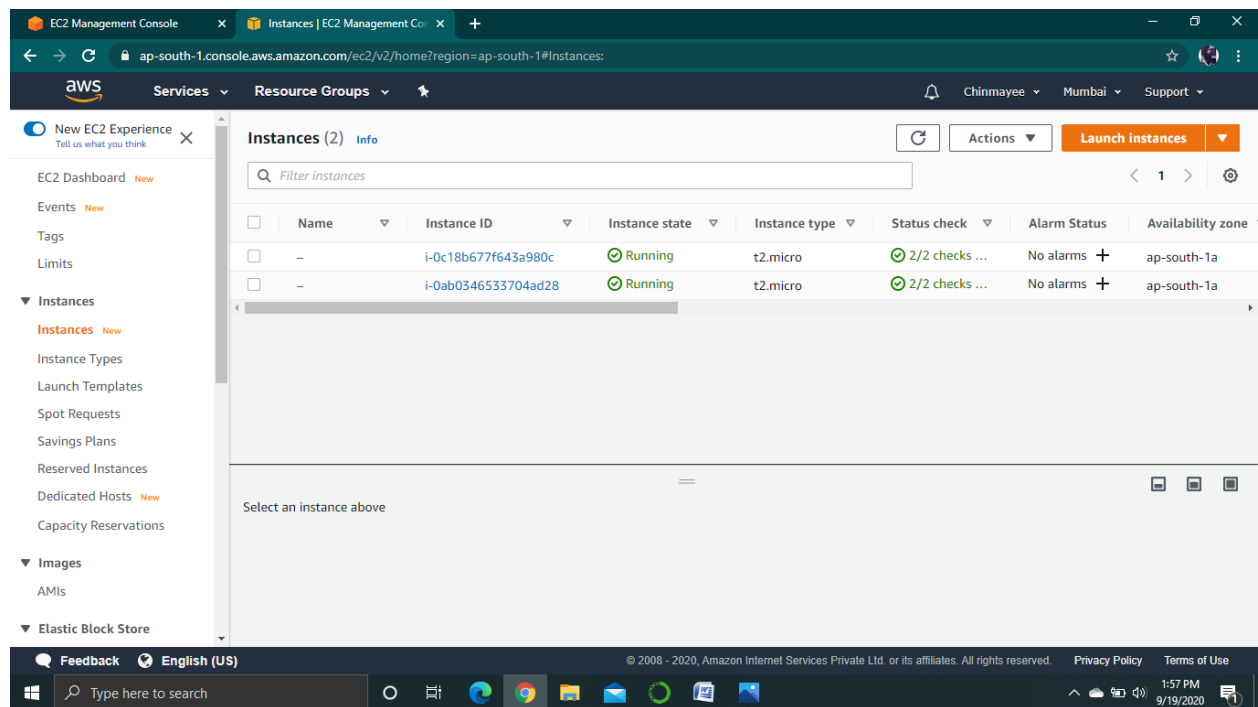


12. The wizard for Auto scaling group is displayed.



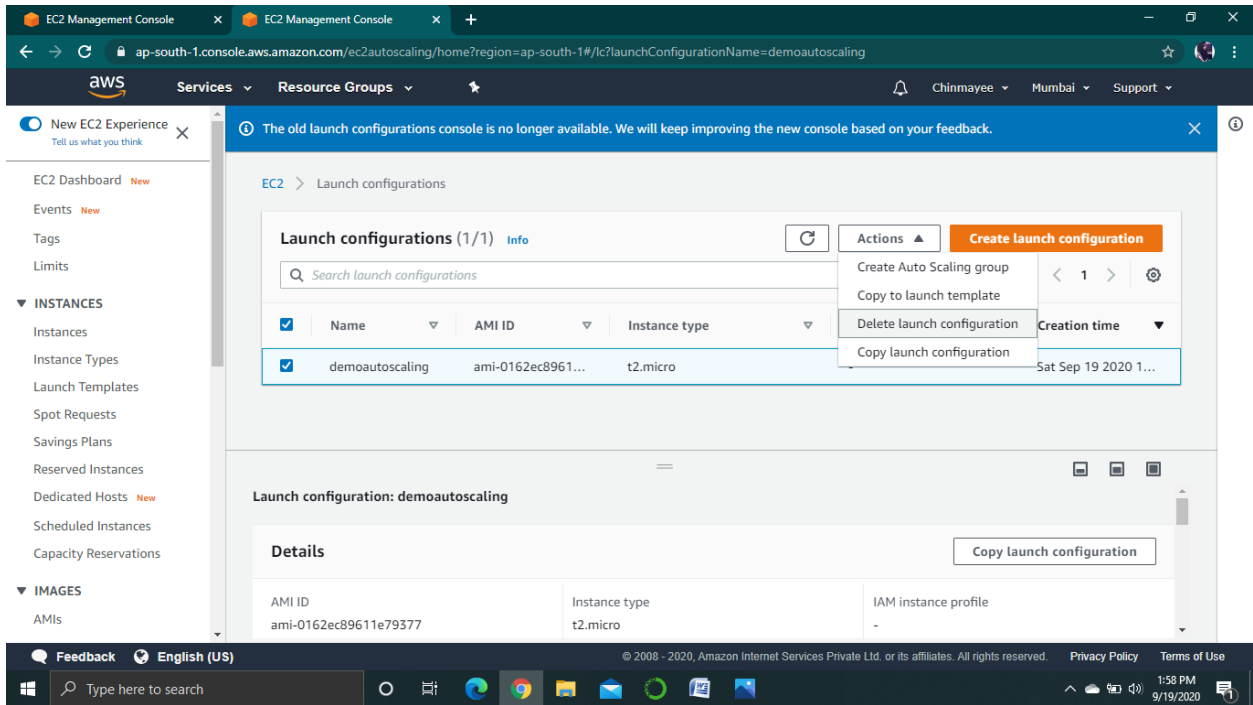
13. Verify whether Auto scaling group has created EC2 instance.

14. The instance has been launched successfully.

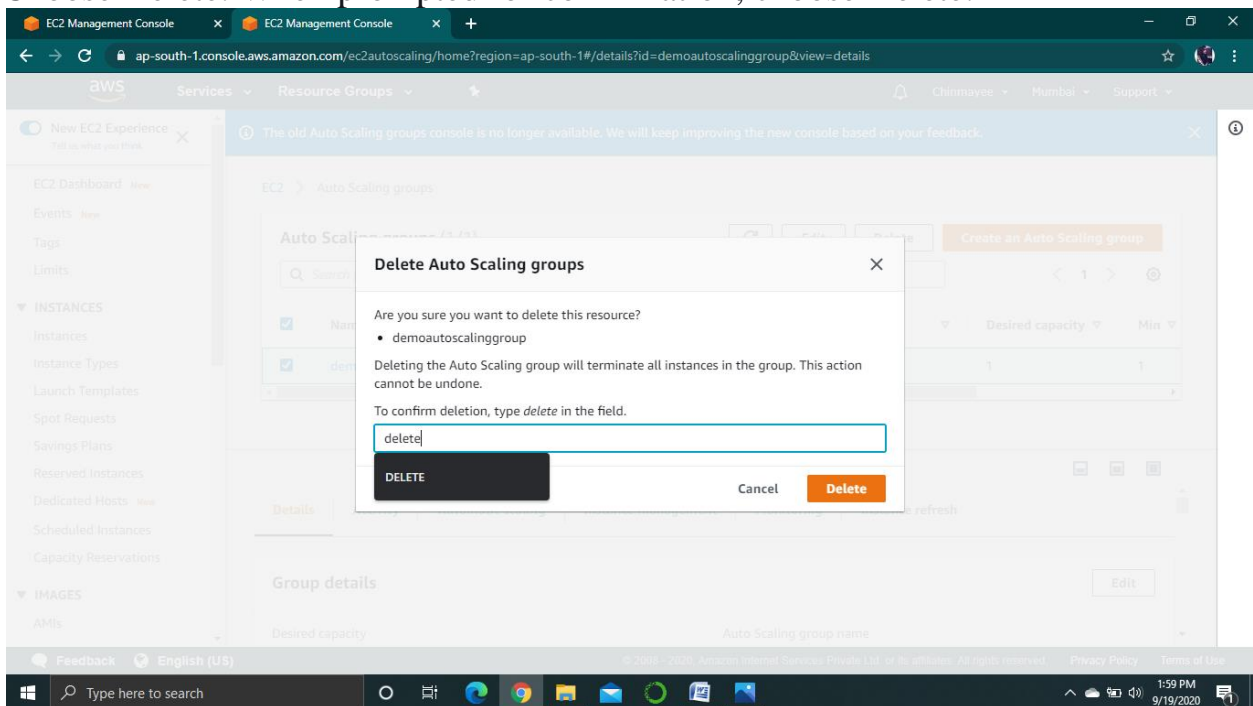


DETACHING EC2 INSTANCE FROM LOAD BALANCING

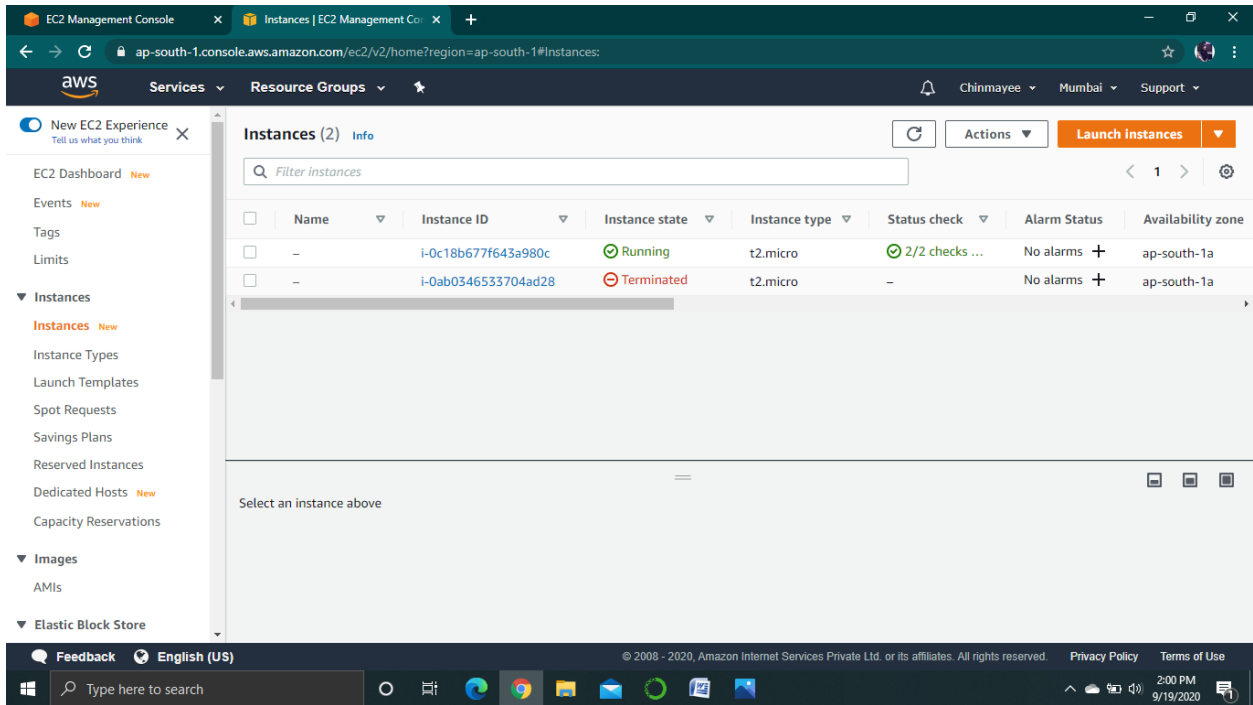
1. Open the Amazon EC2 console .
2. On the navigation pane, under AUTO SCALING, choose Auto Scaling Groups.
3. Select the check box next to your Auto Scaling group.



4. Choose Delete. When prompted for confirmation, choose Delete.

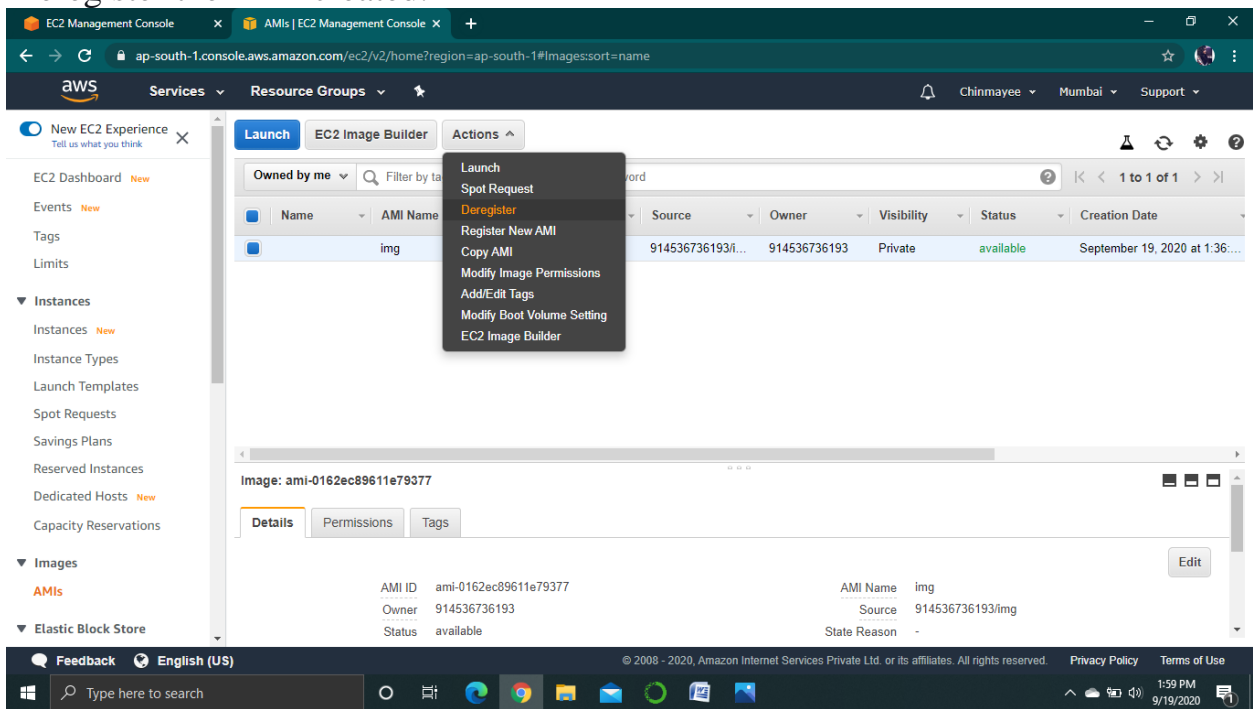


5. On the navigation pane, under AUTO SCALING, choose Launch Configuration.
6. Select the actions, and choose delete Launch Configuration.
7. Choose Delete. When prompted for confirmation, choose Delete.
8. The instances created will also get terminated.



9. Terminate the instance created for AMI.

10. Deregister the AMI created.



11. Select the load balancer you have created and select actions and then delete.

EC2 Management Console

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LoadBalancers:sort=loadBalancerName

ServicesResource Groups

ChinmayeeMumbaiSupport

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

Create Load Balancer

Actions

Filter by tags and attributes

Name	State	VPC ID	Availability Zones	Type
test-loadbalancer		vpc-f2667d9a	ap-south-1a, ap-south-...	classic

Edit health check

Edit subnets

Edit IP address type

Edit instances

Edit listeners

Edit security groups

Edit attributes

Delete

Load balancer: test-loadbalancer

DescriptionInstancesHealth checkListenersMonitoringTagsMigration

Basic Configuration

Name	test-loadbalancer	Creation time	September 19, 2020 at 1:48:05 PM UTC+5:30
------	-------------------	---------------	---

FeedbackEnglish (US)

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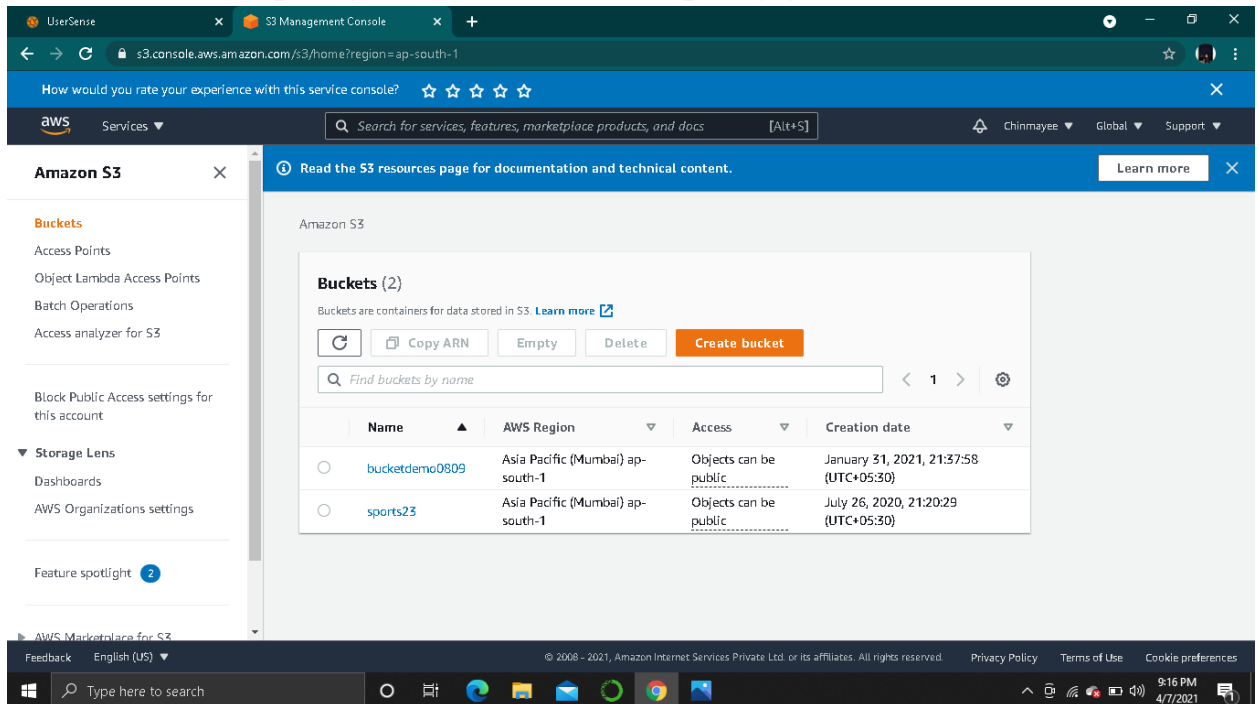
Type here to search

1:59 PM9/19/2020

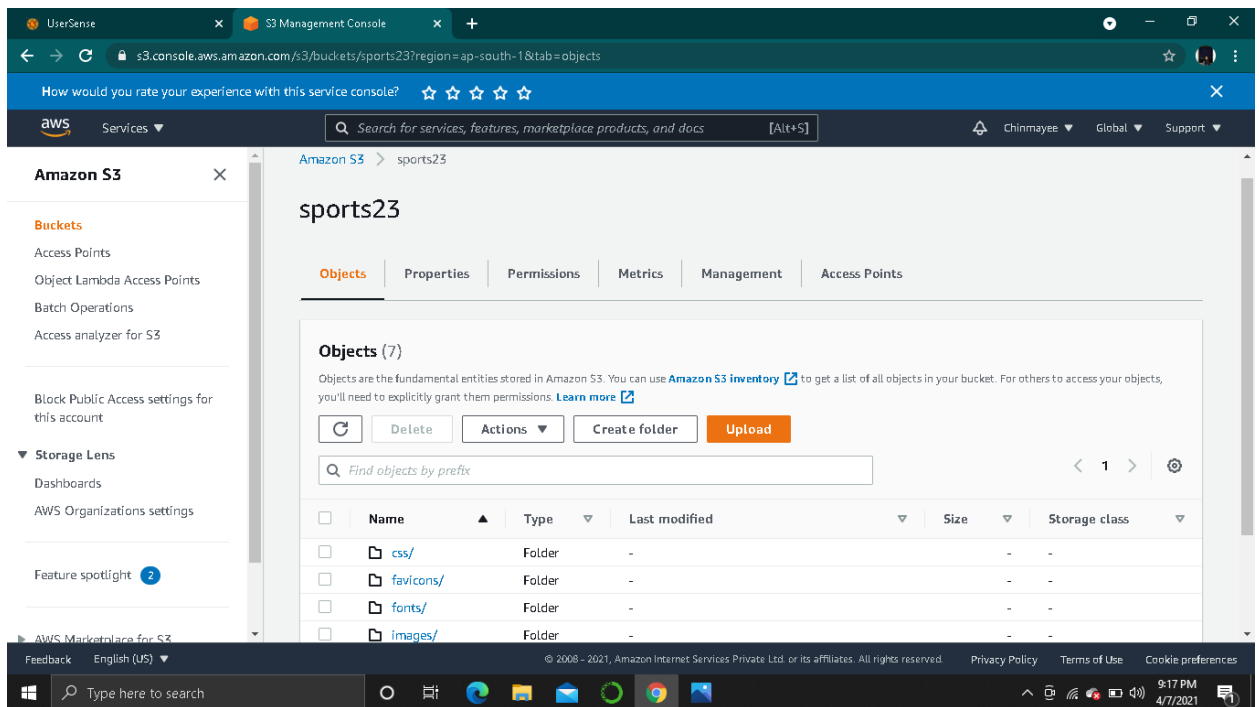
IMPLEMENTATION OF S3 BUCKET POLICY AND VERSIONING

STEPS TO BE FOLLOWED:-

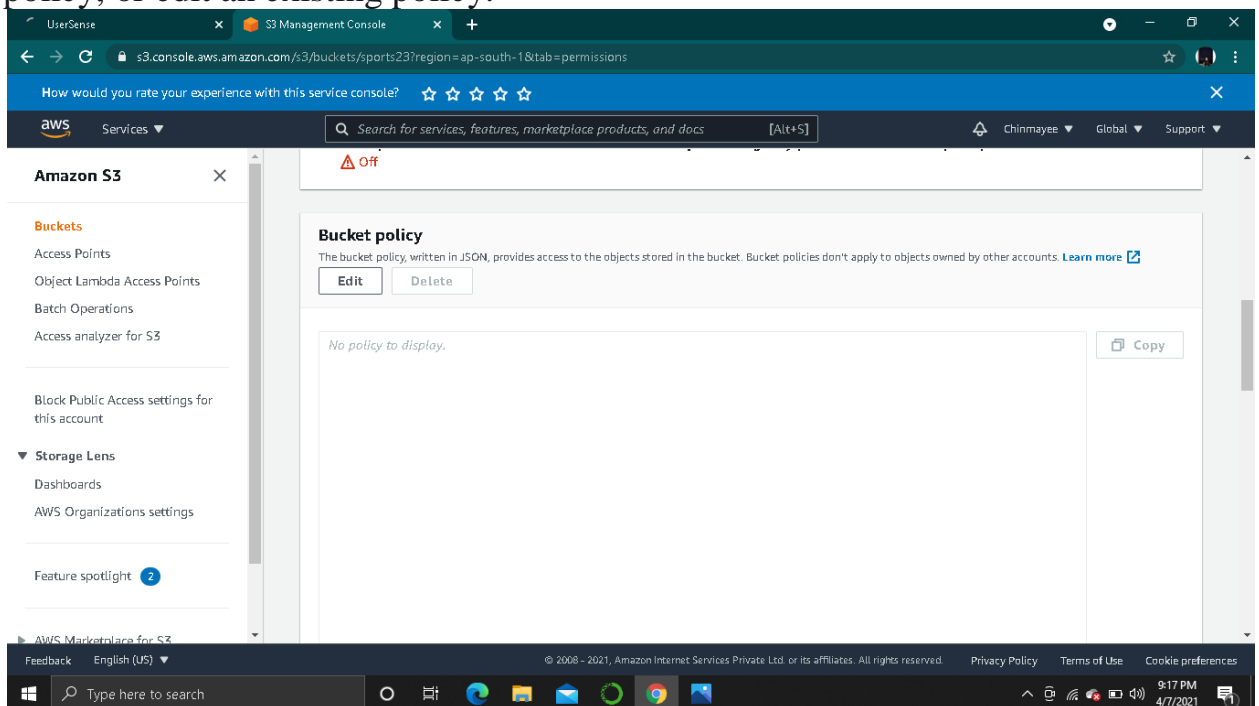
- Sign in to AWS console.
- Open the service S3.
- In the Buckets list, choose the name of the bucket that you want to create a bucket policy for or whose bucket policy you want to edit.



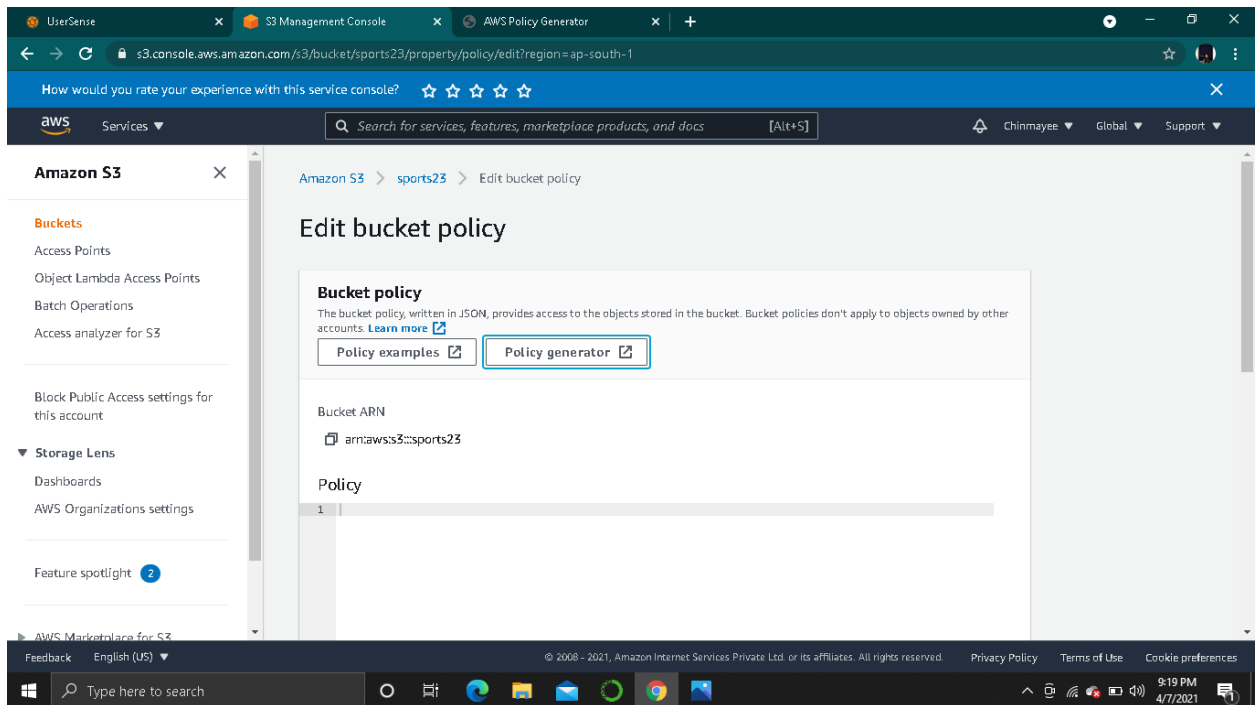
- Choose Permissions.



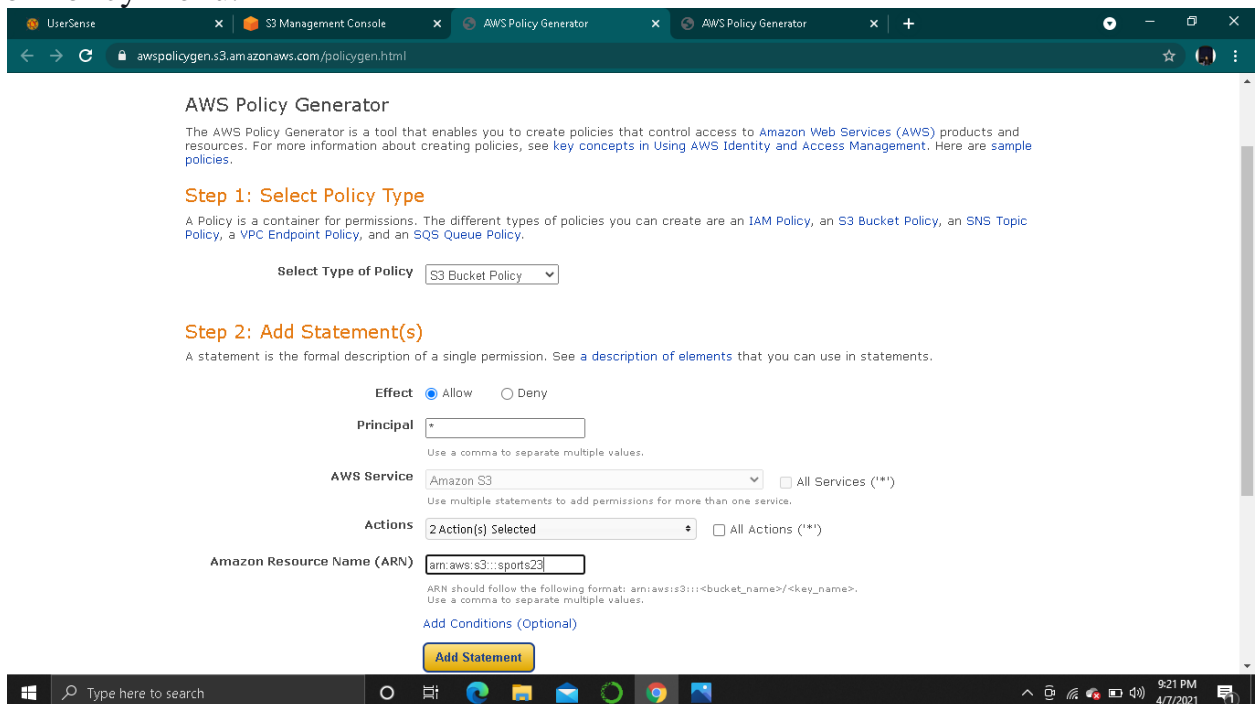
- In the Bucket policy editor text box, type or copy and paste a new bucket policy, or edit an existing policy.



- Choose Policy generator to open the AWS Policy Generator in a new window.



- On the policy generator page, select S3 Bucket Policy from the Select Type of Policy menu.



- Add one or more statements by populating the fields presented, and then choose Generate Policy.

UserSense x S3 Management Console x AWS Policy Generator x AWS Policy Generator x +

← → ↻ 🔒 awspolicygen.s3.amazonaws.com/policygen.html ☆ 👤 ⋮

Actions -- Select Actions -- + ☐ All Actions (**)

Amazon Resource Name (ARN)

ARN should follow the following format: `arn:aws:s3:::<bucket_name>/<key_name>`.
Use a comma to separate multiple values.

[Add Conditions \(Optional\)](#)

[Add Statement](#)

You added the following statements. Click the button below to Generate a policy.

Principal(s)	Effect	Action	Resource	Conditions
* *	Allow	<ul style="list-style-type: none">s3:GetObjects3:PutObject	arn:aws:s3:::sports23	None

Step 3: Generate Policy

A policy is a document (written in the [Access Policy Language](#)) that acts as a container for one or more statements.

[Generate Policy](#) [Start Over](#)

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An **amazon.com** company

- Copy the generated policy text, and return to the Edit bucket policy page in the Amazon S3 console.

UserSense x S3 Management Console x AWS Policy Generator x AWS Policy Generator x +

← → ↻ 🔒 awspolicygen.s3.amazonaws.com/policygen.html ☆ 👤 ⋮

Actions -- Select Actions -- + ☐ All Actions (**)

Amazon Resource Name (ARN)

ARN should follow the following format: `arn:aws:s3:::<bucket_name>/<key_name>`.

[Add Conditions \(Optional\)](#)

[Add Statement](#)

You added the following statements. Click the button below to Generate a policy.

Principal(s)	Effect	Action	Resource	Conditions
* *	Allow	<ul style="list-style-type: none">s3:GetObjects3:PutObject	arn:aws:s3:::sports23	None

Step 3: Generate Policy

A policy is a document (written in the [Access Policy Language](#)) that acts as a container for one or more statements.

[Generate Policy](#) [Start Over](#)

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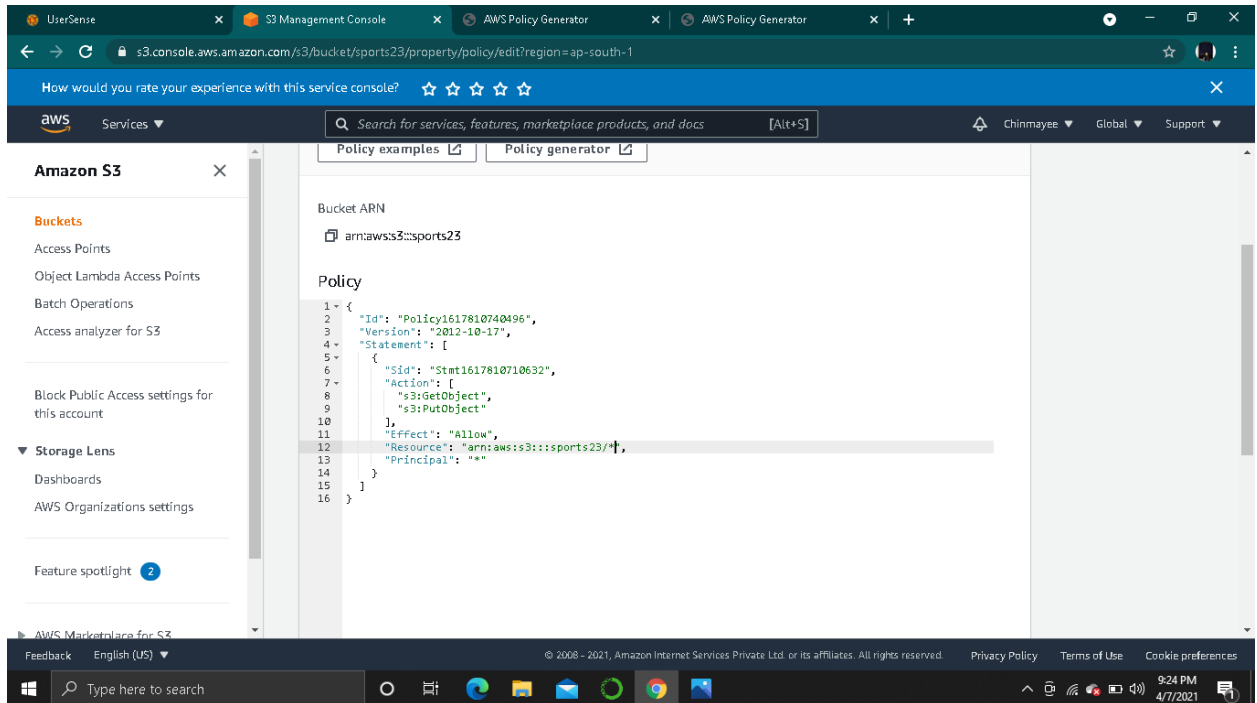
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Policy JSON Document

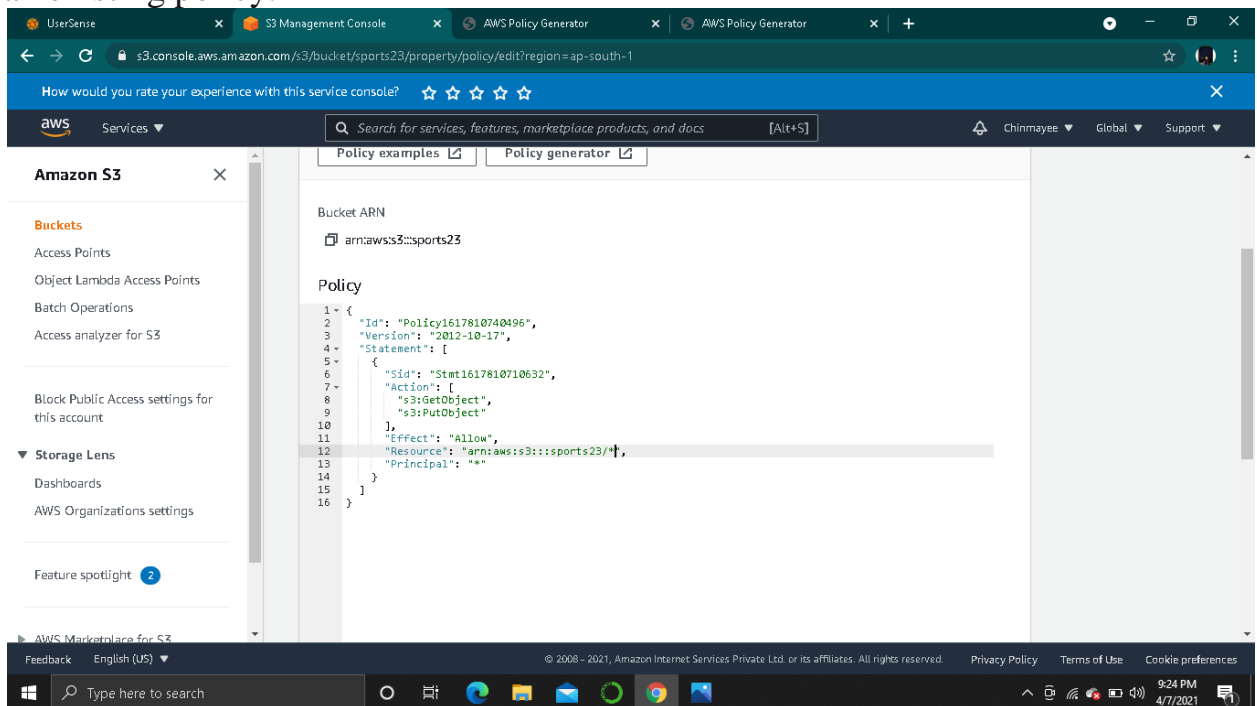
Click below to edit. To save the policy, copy the text below to a text editor.
Changes made below will **not be reflected in the policy generator tool**.

```
{
  "Id": "Policy1617810740498",
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "Stmt1617810710632",
      "Action": [
        "s3:GetObject",
        "s3:PutObject"
      ],
      "Effect": "Allow",
      "Resource": "arn:aws:s3:::sports23",
      "Principal": "*"
    }
  ]
}
```

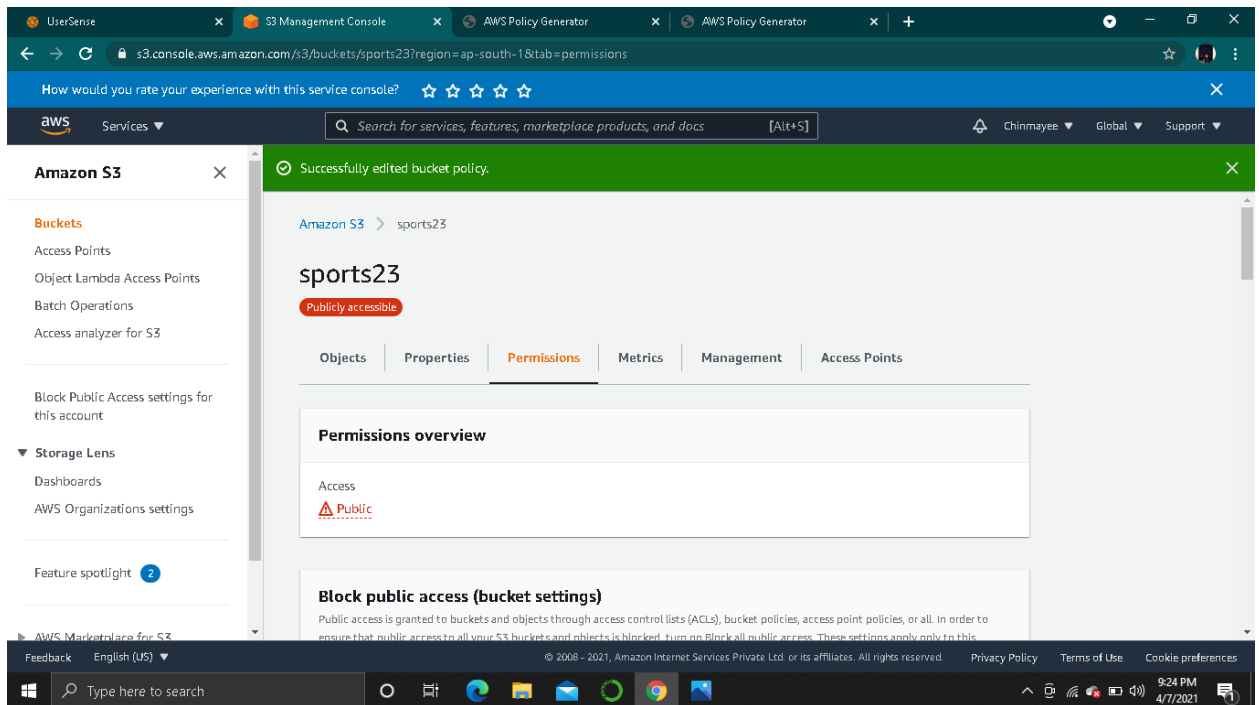
[Close](#)



- In the Policy text field, type or copy and paste a new bucket policy, or edit an existing policy.

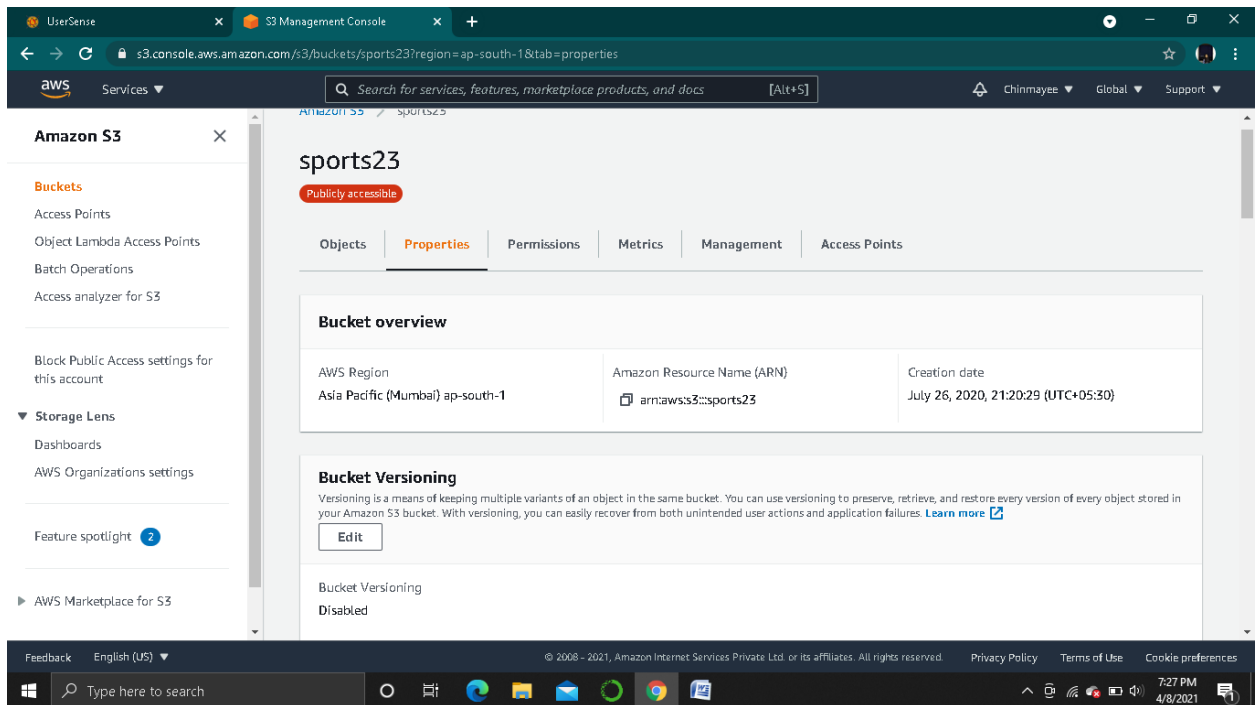


- Preview how your new policy affects public and cross-account access to your resource.
- Choose Save changes.

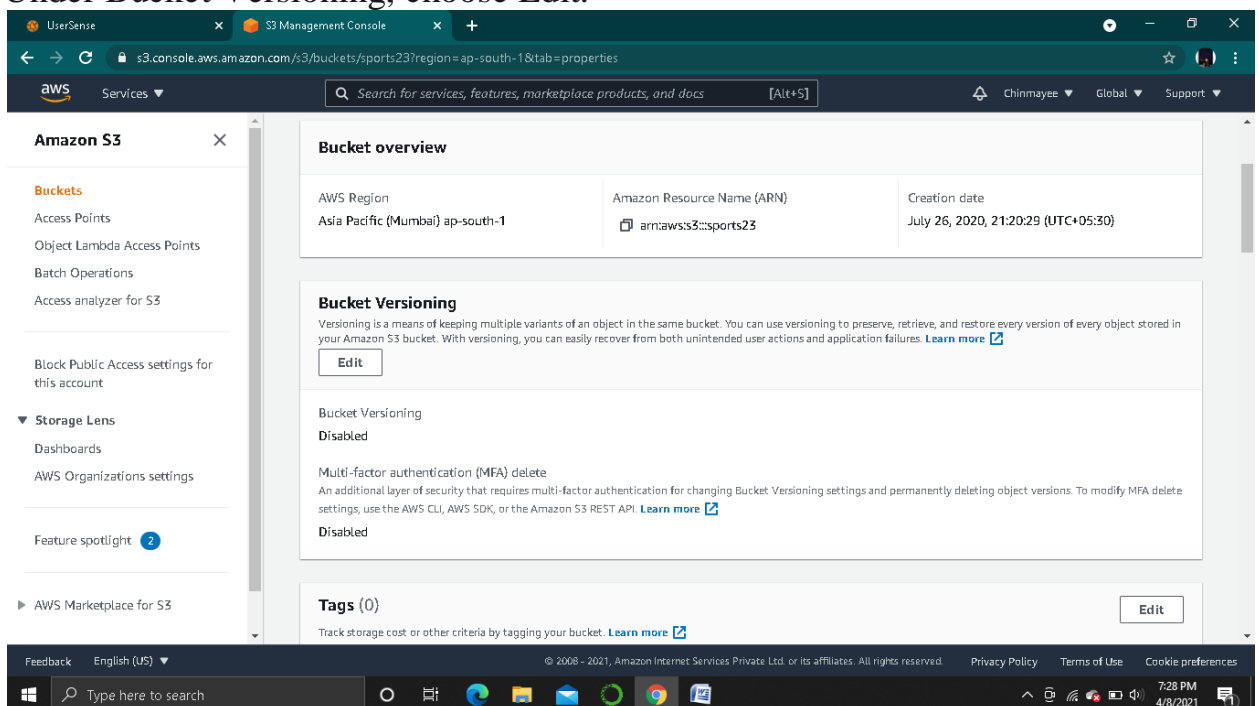


BUCKET VERSIONING

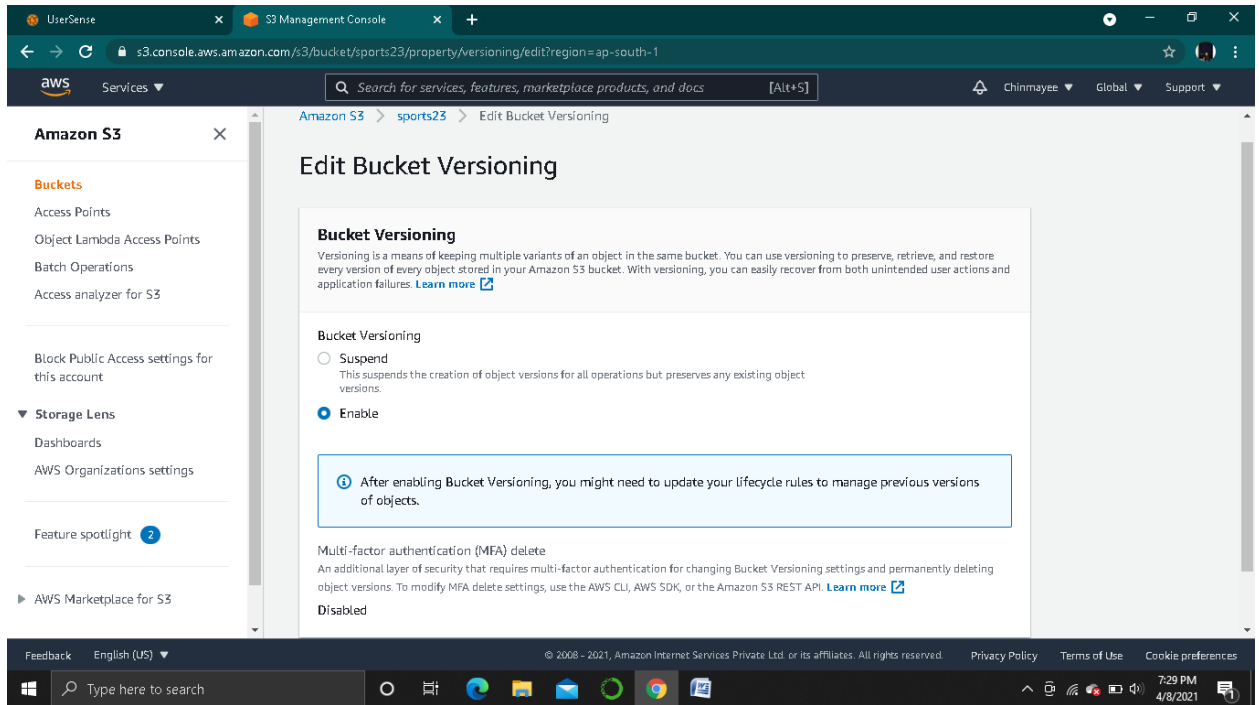
- Sign in to the AWS Management Console and open the Amazon S3.
- In the Buckets list, choose the name of the bucket that you want to enable versioning for.
- Choose Properties.



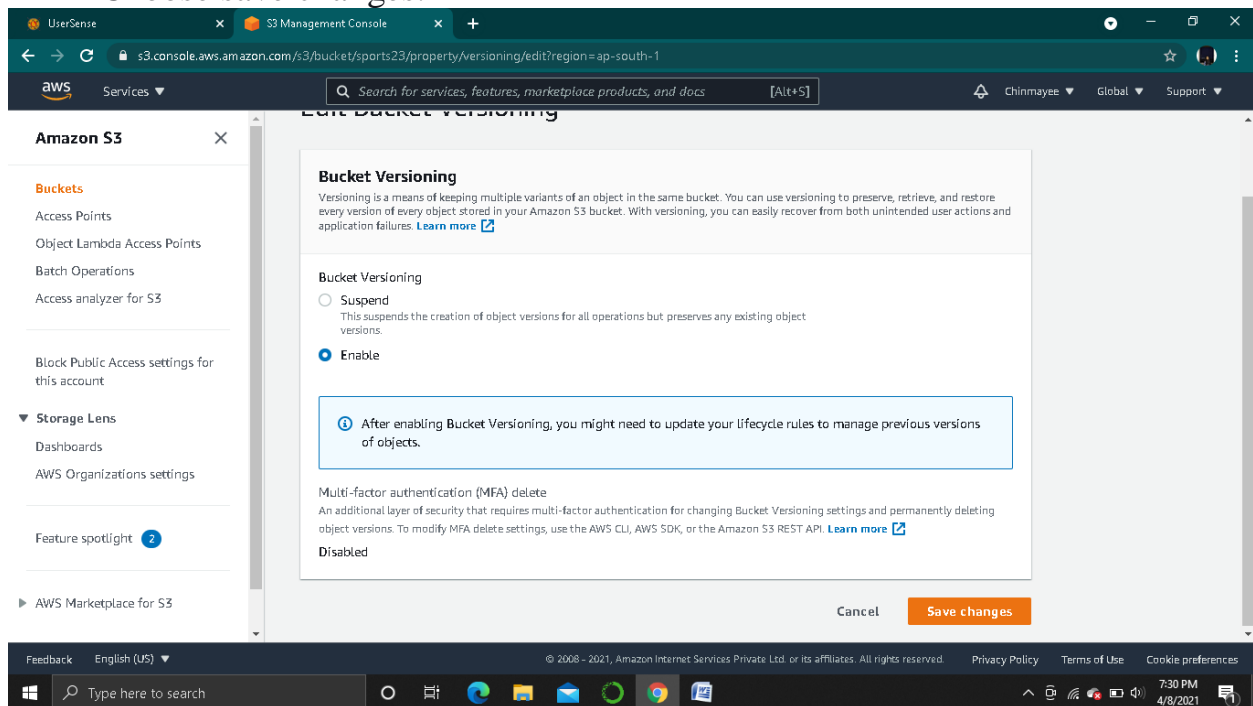
- Under Bucket Versioning, choose Edit.



- Choose Suspend or Enable.



- Choose save changes.



- The window will appear.

