



CLOUD APPLICATION JOURNAL

By Jayesh Dubey





Thakur Educational Trust's (Regd.)

THAKUR COLLEGE OF SCIENCE & COMMERCE

Empowered Autonomous College Permanently Affiliated to University of Mumbai

(NAAC Accredited with Grade "A" (3rd Cycle) & ISO 21001:2018 Certified)

Best College Award by University of Mumbai for the Year 2018-2019



CERTIFICATE

This certifies that **Jayesh Dubey**, Seat Number **4518**, an M.Sc. Part II student in Computer Science, successfully completed all required experiments of the **CC Practicals** as prescribed by the University of Mumbai during the 2025–2026 academic year.

Teacher In-Charge

Head of Department

Date:

Place: Mumbai

Index

Name: Jayesh Dubey

Class: MSc CS - II

Roll no: 4518

Course: CC Practicals

No	Objective	Date	Signature
1	Installing Foss-Cloud in Oracle Vm Virtualbox Manager		
2	Create an IAM User Account in Amazon Web Services (AWS)		
3	Create EC2 Instance and Use it to Host a Website		
4	Store file in S3 Buckets and access it		
5	To Create BACKUP of running amazon Instance by creating an AMIs and launching new instances from the created AMIs		
6	To monitor an EC2 instance using Amazon CloudWatch and create an alarm based on CPU utilization		

PRACTICAL NO. 1

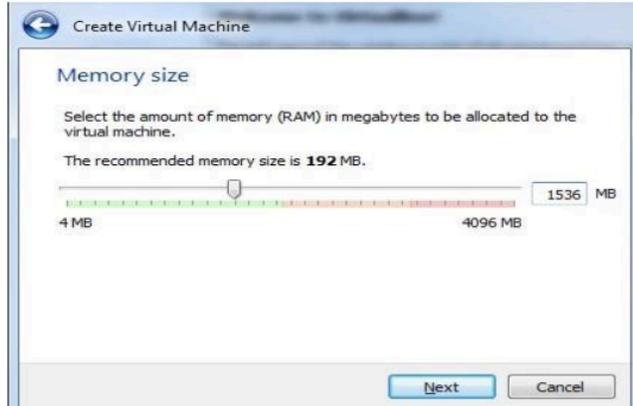
AIM : Installing Foss-Cloud in Oracle Vm Virtualbox Manager

Step 1: Download and Install Foss Cloud
<https://sourceforge.net/projects/foss-cloud/>

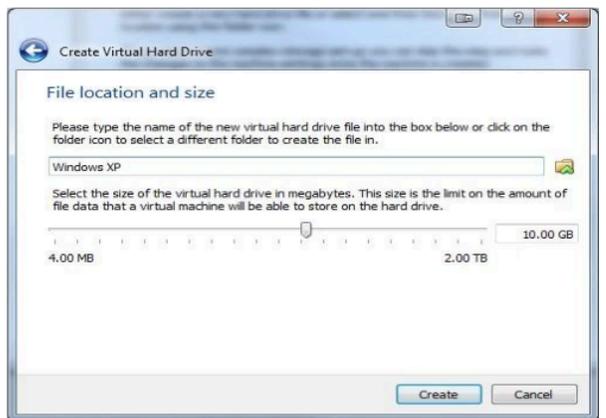
Step 2 : Open Oracle Vm Virtualbox Manager and Create a Virtual Machine



Allocate Memory



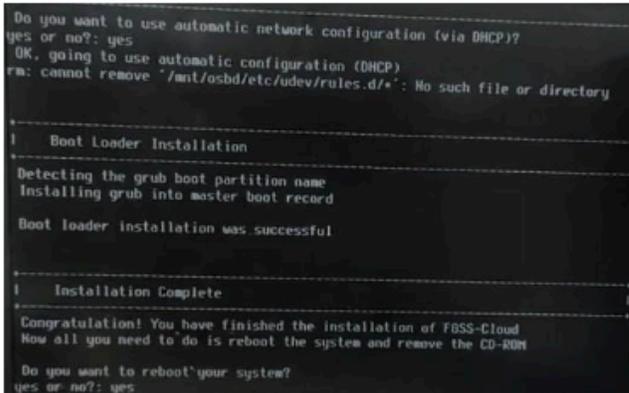
Setup the Hard Drive



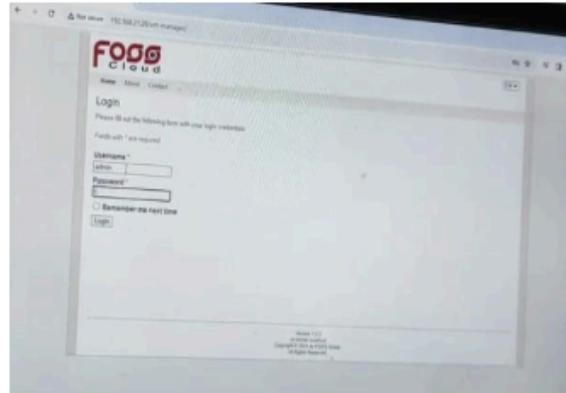
Setup Physical Hard Drive

Setup File Location and

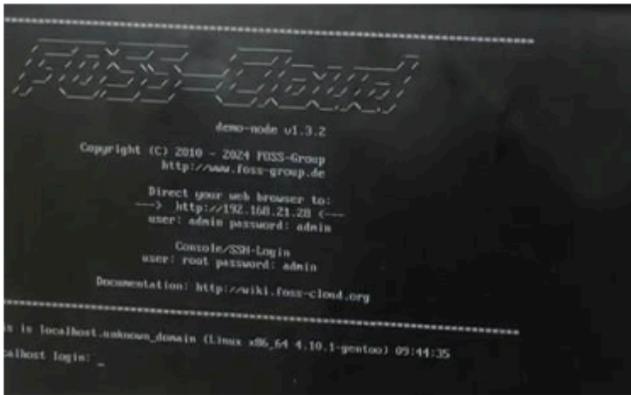
Step 9 : Confirm all entries, and once installed reboot your system.



Step 12 : Open IP Address in Browser and login.



Step 10 : Restart your system.



Step 13 : Welcome Page of Foss Cloud.



Step 11 : Check Up Address using 'ipconfig'..



CONCLUSION : I have Successfully Completed installation of Foss Cloud in Oracle Vm Virtualbox Manager.

PRACTICAL NO. 2

AIM : Create IAM User Account in Amazon Web Services (AWS).

THEORY : What is IAM?

IAM (Identity and Access Management) is an AWS service that allows you to:

- Create **users**
- Assign **permissions**
- Control **who can access what** in AWS Why NOT use a Root Account?
- Root account has **full access**
- If credentials are leaked → **huge risk**
- Best practice:

Create IAM User (AWS Console)

Step 1: Login to AWS Console

- Go to: <https://aws.amazon.com/>
- Login using **Root Account**

Step 2: Open IAM Service

- Search **IAM**
- Click **IAM** → **Users** → **Create user**

Step 3: User Details

- **User name:** Jayesh-aws-user
- Click **Next**

Step 4: Set Permissions

- Step 1 Specify user details
- Step 2 Set permissions
- Step 3 Review and create

Set permissions

Add user to an existing group or create a new one. Using groups is a best-practice way to manage user's permissions by job functions. [Learn more](#)

Permissions options

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

Permissions policies (1/1448) [Create policy](#)

Choose one or more policies to attach to your new user.

Search Filter by Type: All types

Policy name	Type	Attached entities
<input checked="" type="checkbox"/> AccessAnalyzerServiceRolePolicy	AWS managed	0
<input type="checkbox"/> AccountManagementFromVercel	AWS managed	0
<input type="checkbox"/> AdministratorAccess	AWS managed - job function	0
<input type="checkbox"/> AdministratorAccess-Amplify	AWS managed	0
<input type="checkbox"/> AdministratorAccess-AWSElasticBe...	AWS managed	0

Select **Attach policies directly**
Click Next → Create user

- Step 1 Specify user details
- Step 2 Set permissions
- Step 3 Review and create

Review and create

Review your choices. After you create the user, you can view and download the autogenerated password, if enabled.

User details

User name anurag-aws-user	Console password type None	Require password reset No
------------------------------	-------------------------------	------------------------------

Permissions summary

Name	Type	Used as
AdministratorAccess	AWS managed - job function	Permissions policy
IAMUserChangePassword	AWS managed	Permissions policy

Tags - optional

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

No tags associated with the resource.

[Add new tag](#)

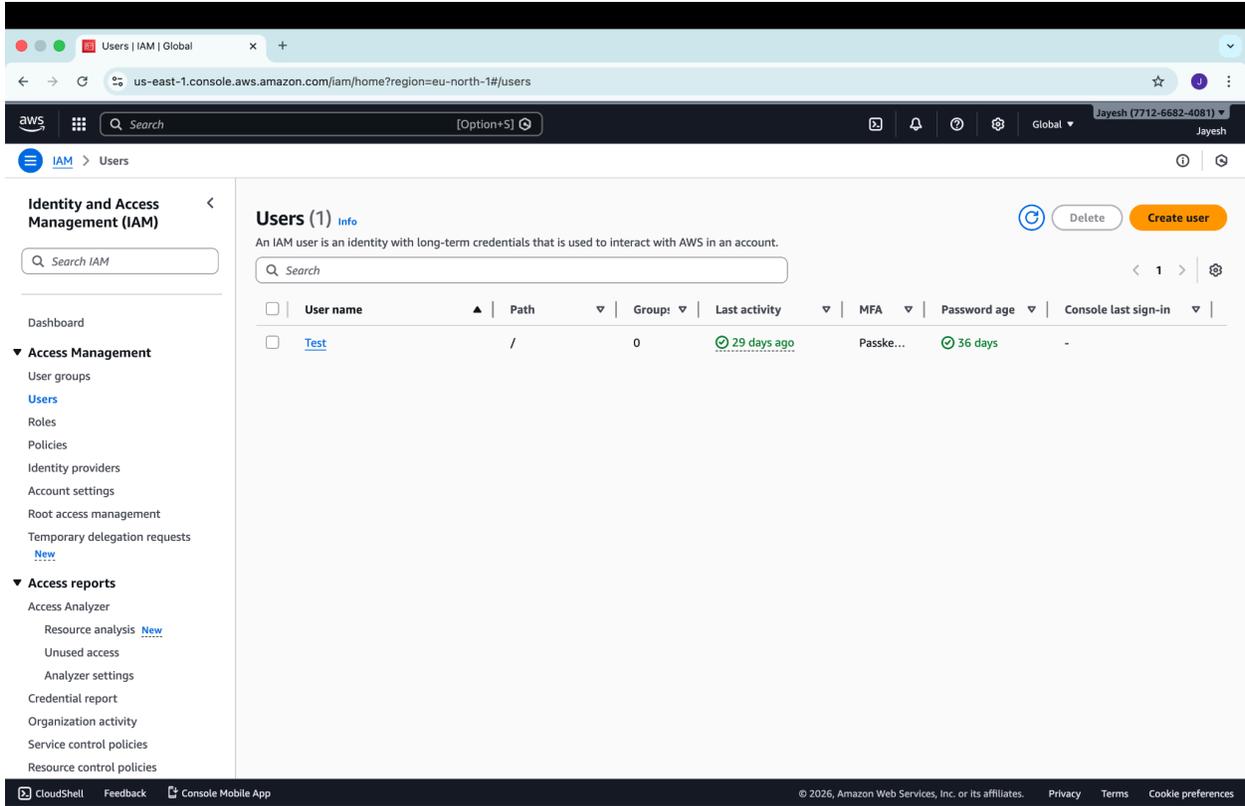
You can add up to 50 more tags.

Cancel [Previous](#) [Create user](#)

The screenshot displays the AWS IAM console interface for a user named 'Test'. The left sidebar shows the navigation menu with categories like 'Access Management' and 'Access reports'. The main content area is titled 'Test Info' and includes a 'Delete' button. Below this is a 'Summary' section with three columns of information: ARN, Console access, and Access keys. The 'Permissions policies' section features a search bar, a 'Filter by Type' dropdown, and a table with columns for 'Policy name', 'Type', and 'Attached via'. The table is currently empty, showing a 'Loading policies' message. The footer contains links for CloudShell, Feedback, Console Mobile App, and copyright information.

Generate Access Key :

Step 1: Go to **IAM** → **Users** → Jayesh-aws-user



Step 2: Scroll → Access keys , click Create access key

Step 3: Choose Command Line Interface (CLI)

Step 1
● **Access key best practices & alternatives**

Step 2 - optional
○ Set description tag

Step 3
○ Retrieve access keys

Access key best practices & alternatives Info

Avoid using long-term credentials like access keys to improve your security. Consider the following use cases and alternatives.

Use case

- Command Line Interface (CLI)**
You plan to use this access key to enable the AWS CLI to access your AWS account.
- Local code**
You plan to use this access key to enable application code in a local development environment to access your AWS account.
- Application running on an AWS compute service**
You plan to use this access key to enable application code running on an AWS compute service like Amazon EC2, Amazon ECS, or AWS Lambda to access your AWS account.
- Third-party service**
You plan to use this access key to enable access for a third-party application or service that monitors or manages your AWS resources.
- Application running outside AWS**
You plan to use this access key to authenticate workloads running in your data center or other infrastructure outside of AWS that needs to access your AWS resources.
- Other**
Your use case is not listed here.

Alternatives recommended

- Use AWS CLI V2 and the `aws login` command to use your existing console credentials in the CLI. [Learn more](#)
- Use AWS CloudShell, a browser-based CLI, to run commands. [Learn more](#)

CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Tick confirmation → Next

us-east-1.console.aws.amazon.com/iam/home?region=eu-north-1#/users/details/Test/create-access-key

Search [Option+S] Ask Amazon Q

Jayesh (7712-6682-4081) Jayesh

IAM > Users > Test > Create access key

Step 3
Retrieve access keys

- Command Line Interface (CLI)**
You plan to use this access key to enable the AWS CLI to access your AWS account.
- Local code**
You plan to use this access key to enable application code in a local development environment to access your AWS account.
- Application running on an AWS compute service**
You plan to use this access key to enable application code running on an AWS compute service like Amazon EC2, Amazon ECS, or AWS Lambda to access your AWS account.
- Third-party service**
You plan to use this access key to enable access for a third-party application or service that monitors or manages your AWS resources.
- Application running outside AWS**
You plan to use this access key to authenticate workloads running in your data center or other infrastructure outside of AWS that needs to access your AWS resources.
- Other**
Your use case is not listed here.

Alternatives recommended

- Use AWS CLI V2 and the `aws login` command to use your existing console credentials in the CLI. [Learn more](#)
- Use AWS CloudShell, a browser-based CLI, to run commands. [Learn more](#)

Confirmation

I understand the above recommendation and want to proceed to create an access key.

Cancel Next

CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

us-east-1.console.aws.amazon.com/iam/home?region=eu-north-1#/users/details/Test/create-access-key

Search [Option+S] Ask Amazon Q

Jayesh (7712-6682-4081) Jayesh

IAM > Users > Test > Create access key

Step 1
Access key best practices & alternatives

Step 2 - optional
Set description tag

Step 3
Retrieve access keys

Set description tag - optional Info

The description for this access key will be attached to this user as a tag and shown alongside the access key.

Description tag value
Describe the purpose of this access key and where it will be used. A good description will help you rotate this access key confidentially later.

jayesh

Maximum 256 characters. Allowed characters are letters, numbers, spaces representable in UTF-8, and: _ . : / = + - @

Cancel Previous Create access key

CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Step 4: Click Create access key

The screenshot shows the AWS IAM console 'Create access key' page. At the top, a green banner states: 'This is the only time that the secret access key can be viewed or downloaded. You cannot recover it later. However, you can create a new access key any time.' Below this, a progress indicator shows three steps: 'Access key best practices & alternatives', 'Set description tag', and 'Retrieve access keys' (which is the current step). The main content area is titled 'Retrieve access keys' and includes a warning: 'Access key: If you lose or forget your secret access key, you cannot retrieve it. Instead, create a new access key and make the old key inactive.' Below this, the 'Access key' is displayed as 'AKIA3HEYVYV6I6SHTZIWS' and the 'Secret access key' is shown as a masked string with a 'Show' button. A section titled 'Access key best practices' lists several guidelines: 'Never store your access key in plain text, in a code repository, or in code.', 'Disable or delete access key when no longer needed.', 'Enable least-privilege permissions.', and 'Rotate access keys regularly.' At the bottom right, there are two buttons: 'Download .csv file' and 'Done'. The footer of the console includes links for 'CloudShell', 'Feedback', and 'Console Mobile App', along with copyright information for Amazon Web Services, Inc. and links for 'Privacy', 'Terms', and 'Cookie preferences'.

Download CSV file

Install AWS CLI:

Download: <https://awscli.amazonaws.com/AWSCLIV2.msi>,
<https://awscli.amazonaws.com/AWSCLIV2.pkg> ,sudo installer -pkg AWSCLIV2.pkg -target /

Install normally -> Open **Command Prompt** - > Verify: aws --version

```
anurag@MacBook-Air:~$ sudo ./aws/install
You can now run: /usr/local/bin/aws --version
anurag@MacBook-Air:~$ aws --version
aws-cli/2.33.23 Python/3.13.11 Linux/6.8.0-100-generic exe/x86_64.ubuntu.24
anurag@MacBook-Air:~$ aws configure
AWS Access Key ID [None]: AKIAWI4DP6A5ZBBTN6WK
AWS Secret Access Key [None]: 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
Default region name [None]: ap-south-1
Default output format [None]: json
anurag@MacBook-Air:~$ aws sts get-caller-identity
{
  "UserId": "AIDAWI4DP6A52ONZCRZUD",
  "Account": "431383113787",
  "Arn": "arn:aws:iam::431383113787:user/anurag-aws-user"
}
```

Configure AWS CLI (Login)

Enter details:

Test AWS CLI Login:

```
{
  "Users": [
    {
      "Path": "/",
      "UserName": "anurag-aws-user",
      "UserId": "AIDAWI4DP6A52ONZCRZUD",
      "Arn": "arn:aws:iam::431383113787:user/anurag-aws-user",
      "CreateDate": "2026-02-17T19:28:35+00:00"
    }
  ]
}
anurag@MacBook-Air:~$ █
```

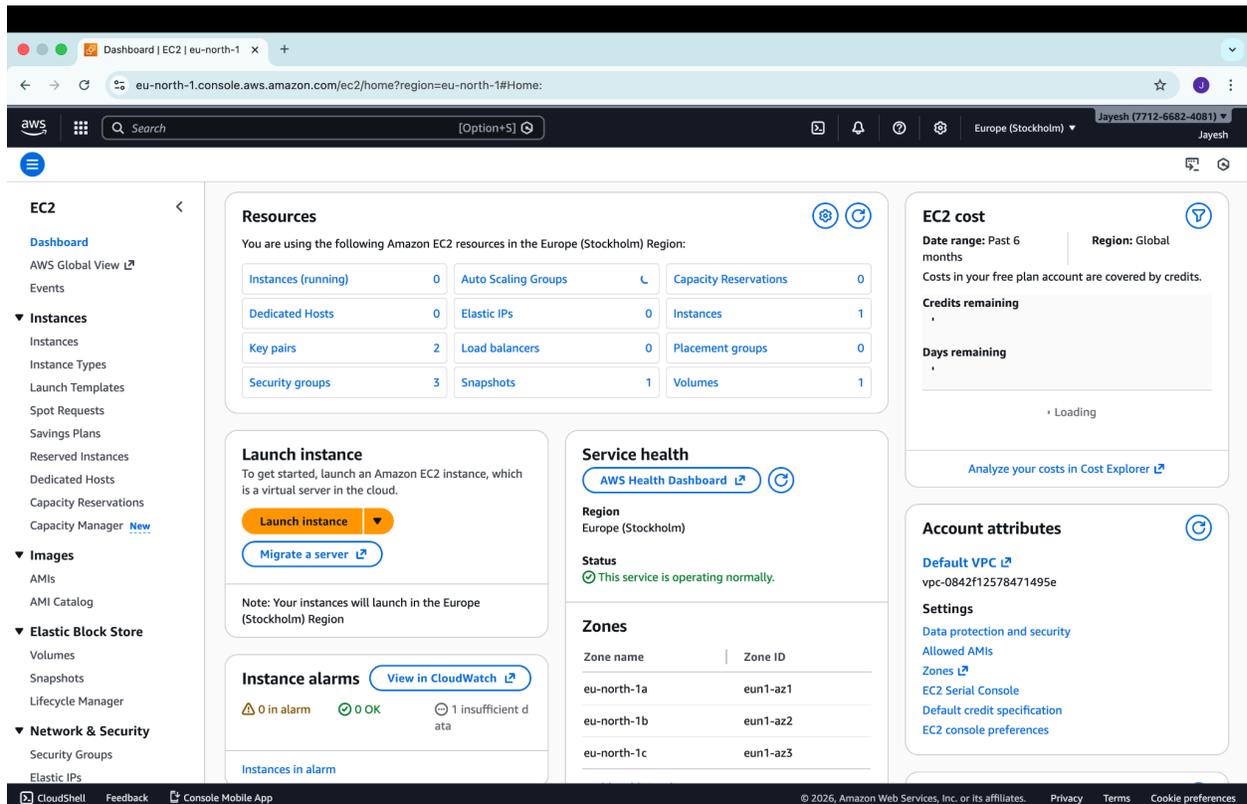
CONCLUSION : I have successfully created the iam user account in AWS providing necessary permission and tested it locally .

PRACTICAL NO. 3

Aim : Create EC2 Instance and Use it to Host a Website.

STEP 1: Create EC2 Linux Instance

1. Login to AWS Console
 - Open 🖱️ <https://aws.amazon.com>
 - Sign in → **AWS Management Console**
1. Open EC2
 - Search **EC2**



Click Launch Instance

Launch an instance | EC2 | eu-north-1 | x +

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

aws [Option+S] Europe (Stockholm) Jayesh (7712-6682-4081) Jayesh

EC2 > Instances > Launch an instance

It seems like you may be new to launching instances in EC2. Take a walkthrough to learn about EC2, how to launch instances and about best practices.

Take a walkthrough Do not show me this message again.

Launch an instance

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags

Name

e.g. My Web Server Add additional tags

Application and OS Images (Amazon Machine Image)

An AMI contains the operating system, application server, and applications for your instance. If you don't see a suitable AMI below, use the search field or choose [Browse more AMIs](#).

Search our full catalog including 1000s of application and OS images

My AMIs Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat SUSE Linux Debian

aws Mac ubuntu Microsoft Red Hat SUSE debian

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

Summary

Number of instances [Info](#)

1

Software Image (AMI)

-

Virtual server type (instance type)

t3.micro

Firewall (security group)

-

Storage (volumes)

-

Cancel Launch instance

Preview code

cloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Instance Details:

Name : LinuxWebServer

OS : Amazon Linux 2023

Instance Type: t2.micro (Free Tier)

Key Pair:

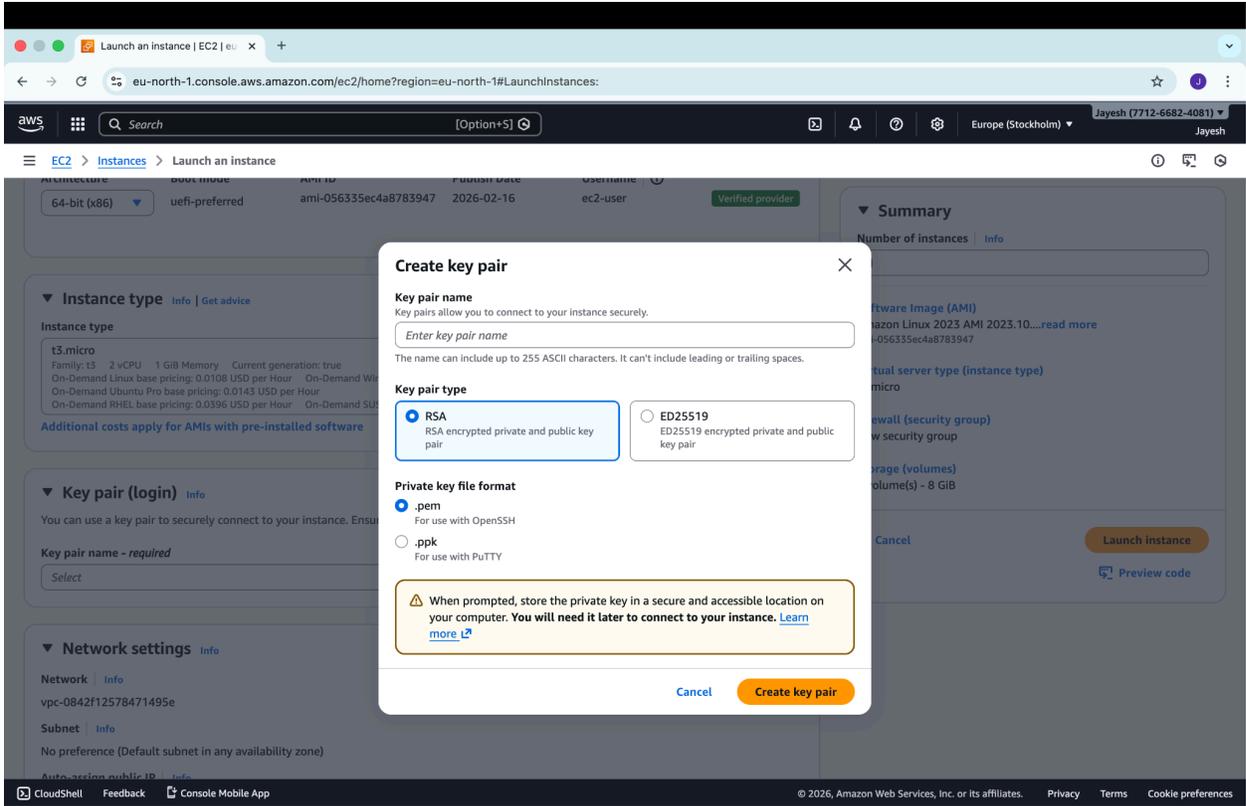
Click Create New Key Pair

Name: linux-key

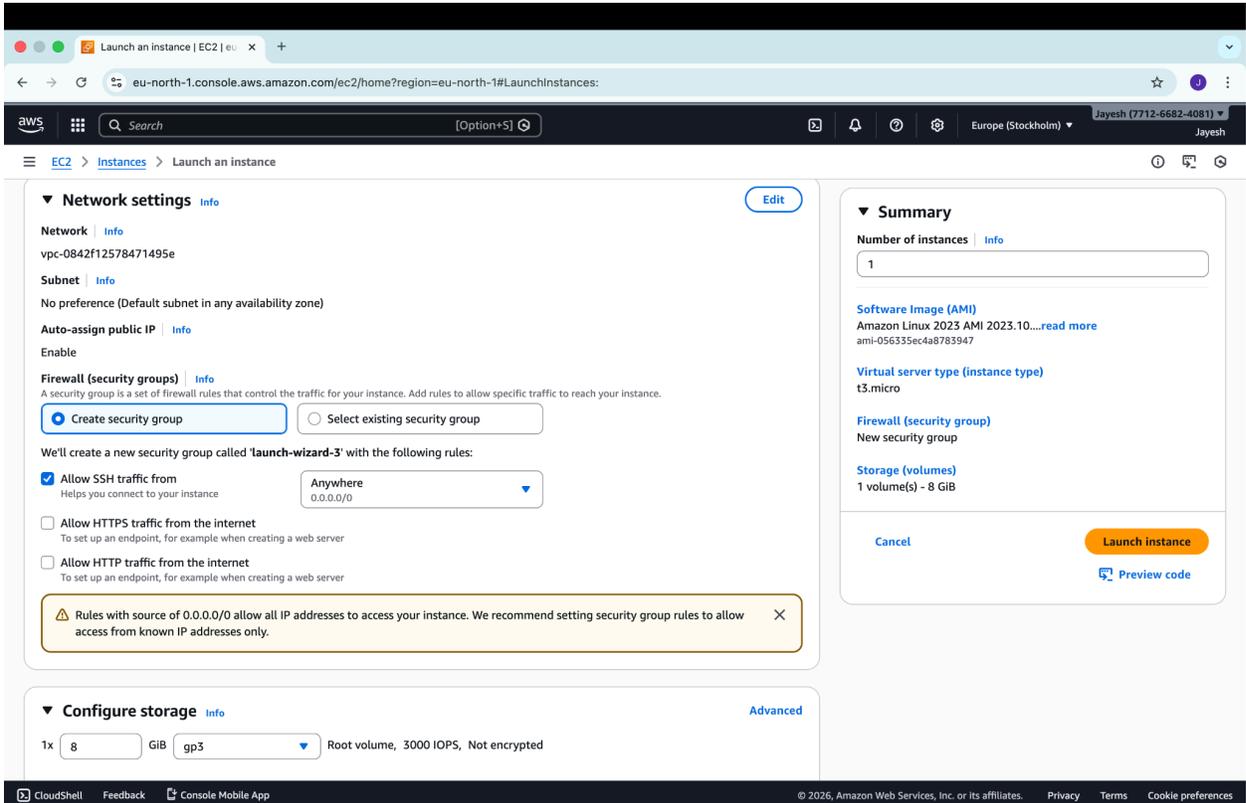
Type: RSA

Format: .pem

Download & keep safe (needed even for browser connect)



Network Settings:



Launch Instance:

The screenshot shows the AWS Management Console for the EC2 Instances page. The browser address bar indicates the URL is eu-north-1.console.aws.amazon.com/ec2/home?region=eu-north-1#instances:v=3,\$case=tags:true%5C,client:false,\$regex=tags:false%5C,client:false. The console header shows the user is logged in as Jayesh (7712-6682-4081) in the Europe (Stockholm) region. The main content area is titled "Instances (1) Info" and shows a table with one instance. The instance is in a "Stopped" state and has the instance type "t3.micro". The instance ID is "i-Od719f4a65058d84c". The table also shows columns for Name, Instance ID, Instance state, Instance type, Status check, Alarm status, Availability Zone, and Public IPv. The left sidebar contains navigation options for EC2, including Dashboard, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Capacity Manager, Images, Elastic Block Store, and Network & Security. The bottom of the page shows the footer with "© 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences".

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv
	i-Od719f4a65058d84c	Stopped	t3.micro	-	View alarms +	eu-north-1b	-

The screenshot displays the AWS Management Console interface for an EC2 instance. The main content area shows the 'Instance summary' for instance ID `i-0d719f4a65058d84c`. The instance is currently in a 'Stopped' state. Key details include:

- Instance ID:** `i-0d719f4a65058d84c`
- Public IPv4 address:** -
- Private IPv4 addresses:** `172.31.37.131`
- Instance state:** Stopped
- Private IP DNS name (IPv4 only):** `ip-172-31-37-131.eu-north-1.compute.internal`
- Instance type:** `t3.micro`
- VPC ID:** `vpc-0842f12578471495e`
- Subnet ID:** `subnet-0665750345e6f4260`
- Instance ARN:** `arn:aws:ec2:eu-north-1:771266824081:instance/i-0d719f4a65058d84c`
- Auto Scaling Group name:** -
- Managed:** false

The left sidebar provides navigation options under the 'EC2' section, including Dashboard, AWS Global View, Events, Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Capacity Manager, Images, AMIs, AMI Catalog, Elastic Block Store, Volumes, Snapshots, Lifecycle Manager, and Network & Security. The top navigation bar shows the user is logged in as 'Jayesh (7712-6682-4081)' in the 'Europe (Stockholm)' region.

STEP 2: Connect Using EC2 Instance via browser

- 1) Go to EC2 Dashboard
- 2) EC2 → Instances
- 3) Select your instance

Instance summary for i-0d719f4a65058d84c [Info](#)

Updated less than a minute ago

Instance ID i-0d719f4a65058d84c	Public IPv4 address -	Private IPv4 addresses 172.31.37.131
IPv6 address -	Instance state Stopped	Public DNS -
Hostname type IP name: ip-172-31-37-131.eu-north-1.compute.internal	Private IP DNS name (IPv4 only) ip-172-31-37-131.eu-north-1.compute.internal	Elastic IP addresses -
Answer private resource DNS name IPv4 (A)	Instance type t3.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendation s. Learn more
Auto-assigned IP address -	VPC ID vpc-0842f12578471495e	Auto Scaling Group name -
IAM role -	Subnet ID subnet-0665750345e6f4260	Managed false
IMDSv2 Required	Instance ARN arn:aws:ec2:eu-north-1:771266824081:instance/i-0d719f4a65058d84c	
Operator -		

[Details](#) | [Status and alarms](#) | [Monitoring](#) | [Security](#) | [Networking](#) | [Storage](#) | [Tags](#)

Choose EC2 Instance → Click Connect

Connect [Info](#)

Connect to an instance using the browser-based client.

Instance ID i-0cb462e74168f7c23 (LinuxWebServer)	VPC ID vpc-09a179aa942914327	Security groups sg-0904b9a63e5416566 (launch-wizard-1)	IAM role -
--	--	--	----------------------

[EC2 Instance Connect](#) | [SSM Session Manager](#) | [SSH client](#) | [EC2 serial console](#)

Instance ID
i-0cb462e74168f7c23 (LinuxWebServer)

Connection type

Connect using a Public IP
Connect using a public IPv4 or IPv6 address

Connect using a Private IP
Connect using a private IP address and a VPC endpoint

Public IPv4 address
3.111.41.91

IPv6 address
-

Username
Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ec2-user.

ec2-user

Note: In most cases, the default username, ec2-user, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Start Apache :

```
sudo systemctl start httpd
```

```
sudo systemctl enable httpd
```

```
Verifying : mod_lua-2.4.66-1.amzn2023.0.1.x86_64 13/13
Installed:
apr-1.7.5-1.amzn2023.0.4.x86_64          apr-util-1.6.3-1.amzn2023.0.2.x86_64          apr-util-ldb-1.6.3-1.amzn2023.0.2.x86_64
apr-util-openssl-1.6.3-1.amzn2023.0.2.x86_64  generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch  httpd-2.4.66-1.amzn2023.0.1.x86_64
httpd-core-2.4.66-1.amzn2023.0.1.x86_64      httpd-fsfilesystem-2.4.66-1.amzn2023.0.1.noarch  httpd-tools-2.4.66-1.amzn2023.0.1.x86_64
libbrotli-1.0.9-4.amzn2023.0.2.x86_64      mailcap-2.1.49-3.amzn2023.0.3.noarch          mod_http2-2.0.27-1.amzn2023.0.3.x86_64
mod_lua-2.4.66-1.amzn2023.0.1.x86_64

Complete!
[ec2-user@ip-172-31-8-6 ~]$ sudo systemctl start httpd
[ec2-user@ip-172-31-8-6 ~]$ sudo systemctl enable httpd
Created symlink /etc/systemd/system/multi-user.target.wants/httpd.service → /usr/lib/systemd/system/httpd.service.
[ec2-user@ip-172-31-8-6 ~]$ sudo systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)
   Active: active (running) since Tue 2026-02-17 20:28:38 UTC; 23s ago
     Docs: man:httd.service(8).
  Main PID: 26492 (httpd)
   Status: "Total requests: 0; Idle/Busy workers 100/0; Requests/sec: 0; Bytes served/sec: 0 B/sec"
    Tasks: 177 (limit: 1120)
   Memory: 12.9M
     CPU: 66ms
  CGroup: /system.slice/httpd.service
          └─26492 /usr/sbin/httpd -DFOREGROUND
            └─26493 /usr/sbin/httpd -DFOREGROUND
              └─26494 /usr/sbin/httpd -DFOREGROUND
                └─26495 /usr/sbin/httpd -DFOREGROUND
                  └─26496 /usr/sbin/httpd -DFOREGROUND

Feb 17 20:28:38 ip-172-31-8-6.ap-south-1.compute.internal systemd[1]: Starting httpd.service - The Apache HTTP Server...
Feb 17 20:28:38 ip-172-31-8-6.ap-south-1.compute.internal systemd[1]: Started httpd.service - The Apache HTTP Server.
Feb 17 20:28:38 ip-172-31-8-6.ap-south-1.compute.internal httpd[26492]: Server configured, listening on: port 80
[ec2-user@ip-172-31-8-6 ~]$
```

i-0cb462e74168f7c23 (LinuxWebServer) ✕

PublicIPs: 3.111.41.91 PrivateIPs: 172.31.8.6

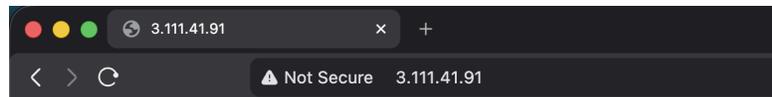
CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

STEP 5: Test Apache WebServer

Copy public Ipv4 Address

EC2 → Instances → Networking → Public Ipv4

Open Browser : http://public_ip



It's Live!

STEP 6: Create Your WebSite

Web folder : `/var/www/html`

Create `index.html` → `sudo nano /var/www/html/index.html`

```
GNU nano 8.3 index.html modified
<!DOCTYPE html>
<html>
<head>
  <title>Student Details</title>
  <style>
    body {
      margin: 0;
      height: 100vh;
      display: flex;
      justify-content: center;
      align-items: center;
      background: linear-gradient(135deg, #1e3c72, #2a5298);
      font-family: Arial, sans-serif;
    }

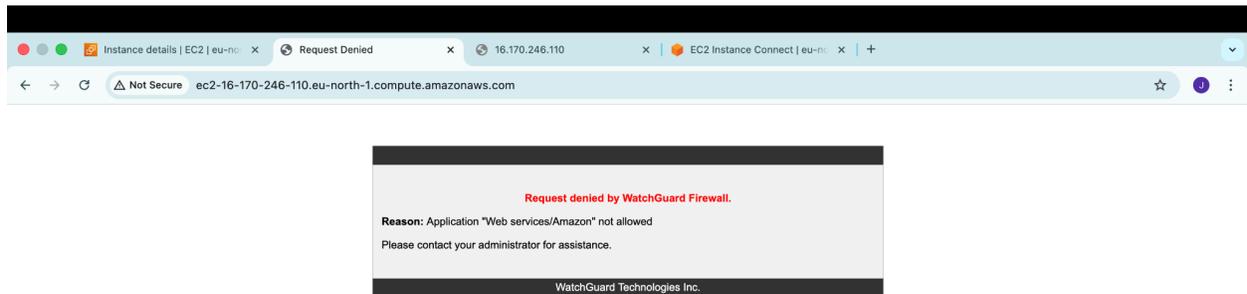
    .card {
      background: #ffffff;
      padding: 40px 60px;
      border-radius: 15px;
      box-shadow: 0 10px 25px rgba(0, 0, 0, 0.3);
      text-align: center;
    }

    .name {
      font-size: 32px;
      font-weight: bold;
      color: #2a5298;
      background-color: #e6f0ff;
      padding: 10px 20px;
      border-radius: 8px;
    }
  </style>
</head>
</html>
```

i-Ocb462e74168f7c23 (LinuxWebServer) ✕
PublicIPs: 3.111.41.91 PrivateIPs: 172.31.8.6

CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

STEP 7: Refresh WebSite



Conclusion : I have successfully completed the practical Ec2 Instance creation and hosting website .

PRACTICAL NO. 4

Aim : Store file in S3 Buckets and access it

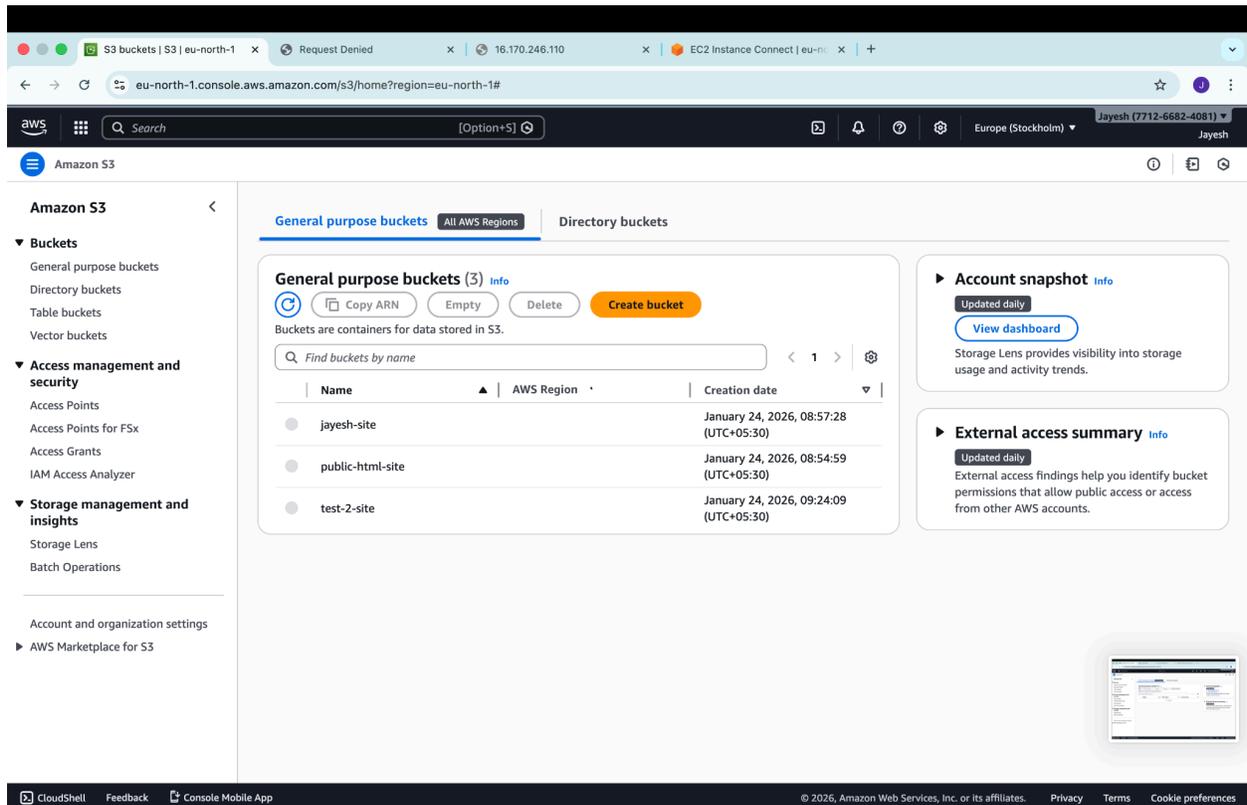
What is S3 ?

Amazon S3 (Simple Storage Service) is:

- Object storage
- Stores data as objects inside buckets
- Highly durable (99.999999999%) Used for:
- Backups
- Logs
- Media files
- Static websites

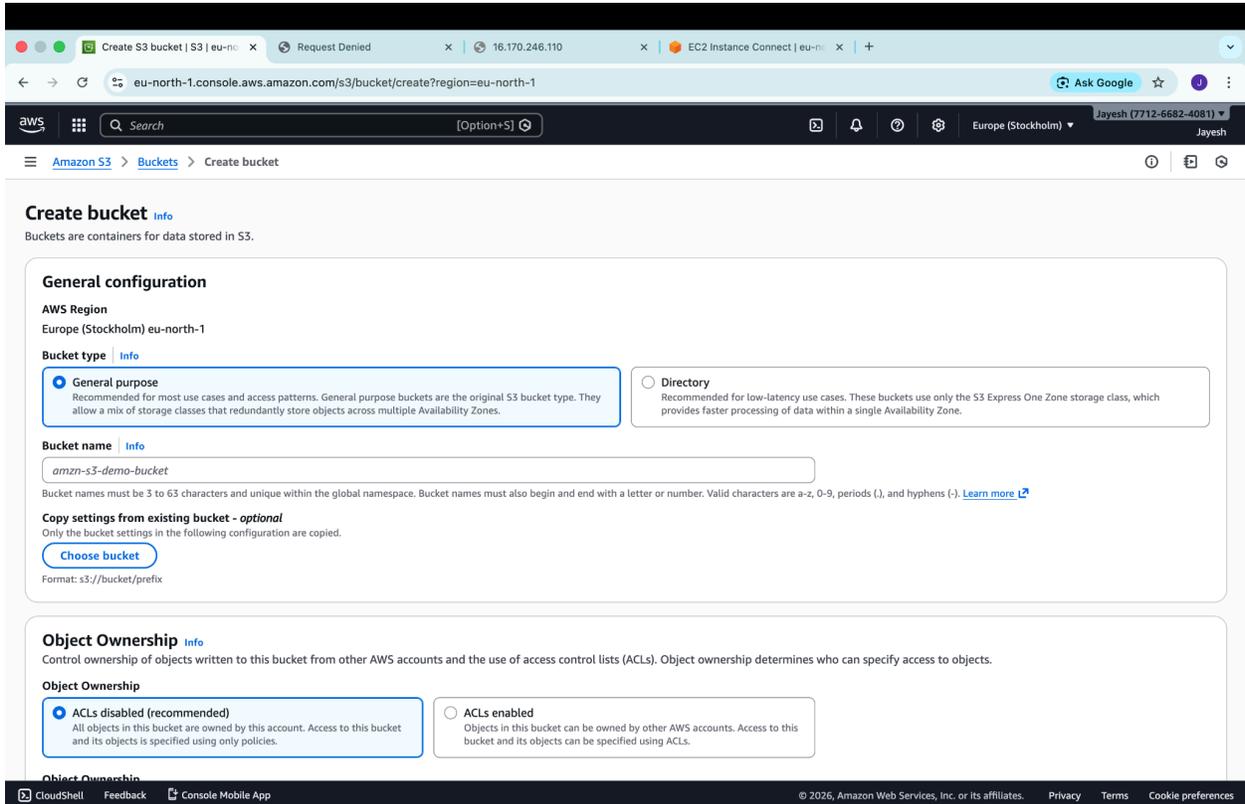
PART 1: Create S3 Bucket (AWS Console) Steps:

1. Login to AWS Management Console
2. Go to S3
3. Click Create bucket



The screenshot shows the AWS Management Console interface for S3 buckets. The browser address bar indicates the URL is `eu-north-1.console.aws.amazon.com/s3/home?region=eu-north-1#`. The console header shows the user is logged in as 'Jayesh' in the 'Europe (Stockholm)' region. The main content area is titled 'General purpose buckets (3)' and includes a search bar and a table of buckets. The 'Create bucket' button is highlighted in orange. To the right, there are two informational panels: 'Account snapshot' and 'External access summary'.

Name	AWS Region	Creation date
jayesh-site		January 24, 2026, 08:57:28 (UTC+05:30)
public-html-site		January 24, 2026, 08:54:59 (UTC+05:30)
test-2-site		January 24, 2026, 09:24:09 (UTC+05:30)



Bucket Configuration

Bucket Name:

Must be globally unique across all AWS users.

Example:

my-company-backup-2026

Region:

Choose the nearest region for lower latency.

Example:

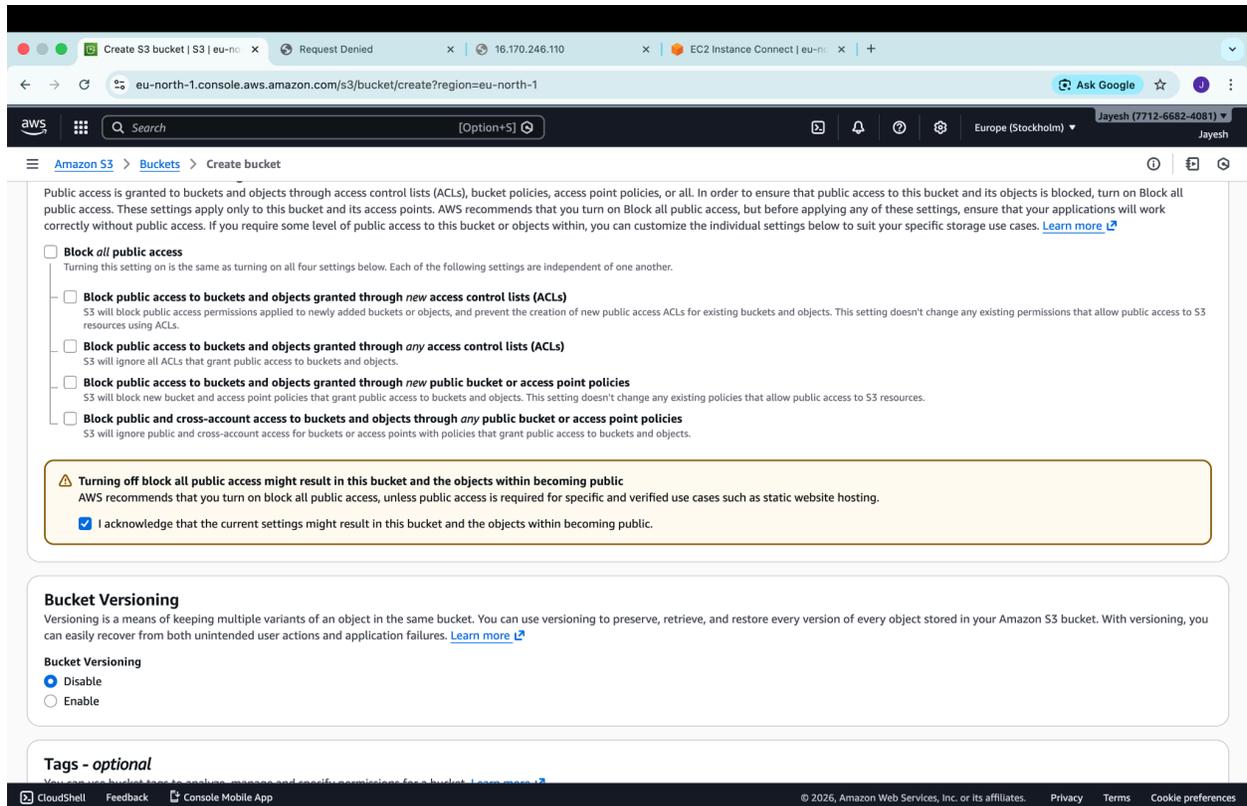
ap-south-1 (Mumbai)

Permissions:

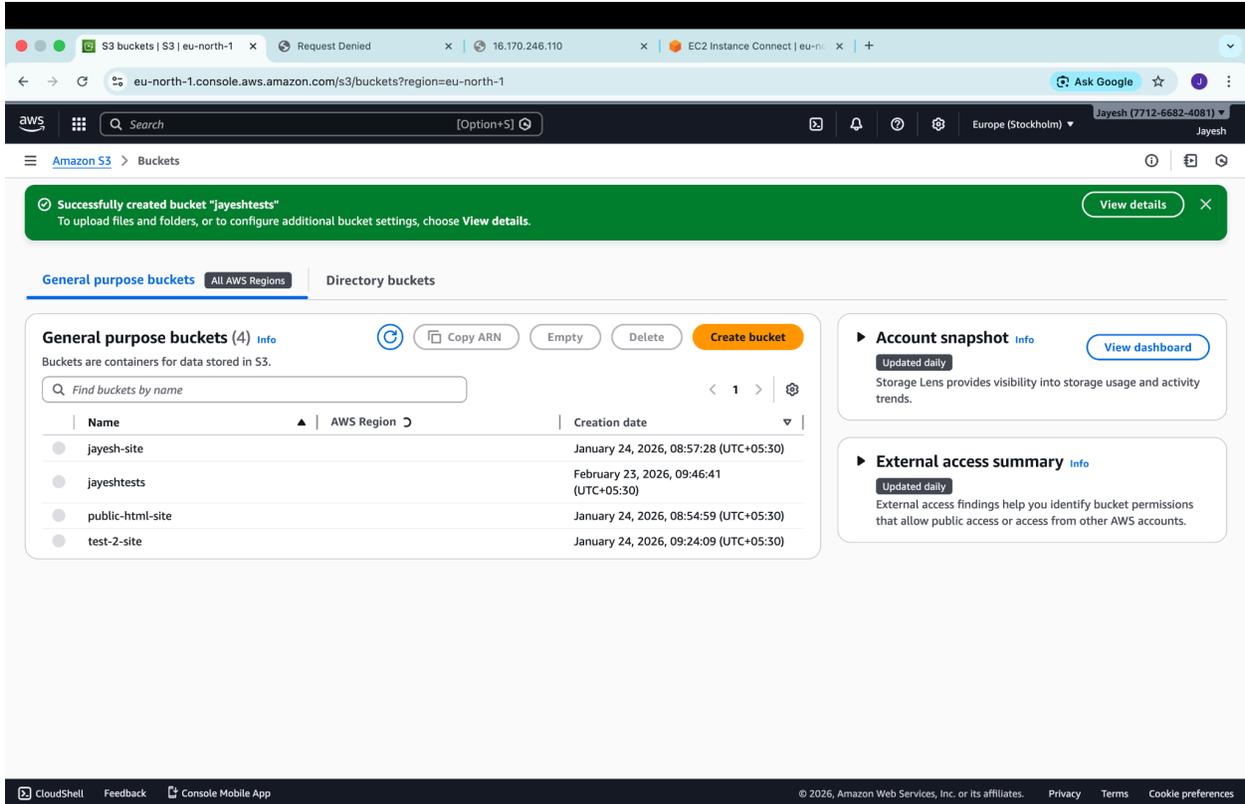
Block all public access: **Disabled**

Other settings: Versioning → optional

Encryption → optional (AES-256 default)



Click Create Bucket:



Upload File to S3 from Windows via AWS Console (Easiest)

Steps:

1. Open S3
2. Click your **Bucket Name**
3. Click **Upload**
4. Click **Add files** or **Add folder**
5. **Select file from your Windows PC**
6. Click **Upload**

Browser tabs: jayesh-site - S3 bucket | S3 | Request Denied | 16.170.246.110 | EC2 Instance Connect | eu-north-1

Address bar: eu-north-1.console.aws.amazon.com/s3/buckets/jayesh-site?region=eu-north-1&tab=objects

Header: Amazon S3 > Buckets > jayesh-site

jayesh-site info

Navigation: Objects | Metadata | Properties | Permissions | Metrics | Management | Access Points

Objects (1) Copy S3 URI Copy URL Download Open L² Delete Actions Create folder Upload

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Find objects by prefix: Show versions < 1 >

Name	Type	Last modified	Size	Storage class
invoice.html	html	January 24, 2026, 08:59:38 (UTC+05:30)	9.6 KB	Standard

Footer: CloudShell | Feedback | Console Mobile App | © 2026, Amazon Web Services, Inc. or its affiliates. Privacy | Terms | Cookie preferences

Header: Amazon S3 | Anurag Yadav (4311-8311-5787)

Upload succeeded
For more information, see the [Files and folders](#) table.

Upload: status

After you navigate away from this page, the following information is no longer available.

Summary

Destination s3://anurag-tsc	Succeeded 1 file, 2.5 MB (100.00%)	Failed 0 files, 0 B (0%)
---------------------------------------	--	------------------------------------

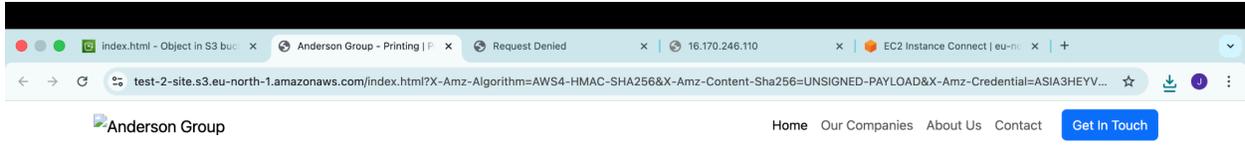
Navigation: Files and folders | Configuration

Files and folders (1 total, 2.5 MB)

Find by name:

Name	Folder	Type	Size	Status	Error
My Photo.png	-	image/png	2.5 MB	Succeeded	-

Footer: CloudShell | Feedback | Console Mobile App | © 2026, Amazon Web Services, Inc. or its affiliates. Privacy | Terms | Cookie preferences



Our Group

- Anderson Group
- Ratanraj Packaging
- SRO Foils
- Interior Infotech
- Lumin Design
- Sumeru Corporation

Anderson Group

Printing | Packaging | Corporate Gifting | IT

Transform your business relationships with premium solutions across multiple industries. Excellence delivered for over 25 years.

Conclusion : I have Successfully uploaded my file in S3 bucket .

PRACTICAL NO. 5

AIM: To Create BACKUP of running amazon Instance by creating an AMIs and launching new instances from the created AMIs.

THEORY: An AMI is a template that AWS uses to launch EC2 instances. What does an AMI contain?

An AMI includes:

- Root volume snapshot
 - Usually EBS-backed
 - Contains OS (Amazon Linux, Ubuntu, Windows, etc.)
- Additional EBS volume snapshots (if attached)
- Launch permissions
 - Private
 - Shared with specific AWS accounts
 - Public (anyone can use it)
- Block device mapping: Defines volume sizes, types, delete-on-termination

Steps: Create an AMI (backup) from existing EC2

1. Go to EC2 Dashboard
2. Click Instances
3. Select the EC2 instance you want to back up
4. Click Actions → Image and templates → Create image
5. Fill in:
 - Image name:
 - Image description (optional)Click Create image
6. Click Create image

The screenshot displays the AWS Management Console interface for an EC2 instance. The breadcrumb navigation shows 'EC2 > Instances > i-0cb462e74168f7c23'. The main content area is titled 'Instance summary for i-0cb462e74168f7c23 (LinuxWebServer)'. It includes a 'Connect' button, an 'Instance state' dropdown set to 'Running', and an 'Actions' dropdown menu. The 'Actions' menu is open, highlighting 'Image and templates'. The instance details are organized into columns: Instance ID (i-0cb462e74168f7c23), IPv6 address (None), Hostname type (IP name: ip-172-31-8-6.ap-south-1.compute.internal), Answer private resource DNS name (IPv4 (A)), Auto-assigned IP address (3.111.41.91 [Public IP]), IAM role (None), IMDSv2 (Required), Operator (None), Public IPv4 address (3.111.41.91 | open address), Instance state (Running), Private IPv4 address (172.31.8.6), Public DNS (ec2-3-111-41-91.ap-south-1.compute.amazonaws.com | open address), Private DNS name (IPV4 only) (ip-172-31-8-6.ap-south-1.compute.internal), Instance type (t2.micro), VPC ID (vpc-09a179aa942914327), Subnet ID (subnet-09fbeb7419b40b21a), and Instance ARN (arn:aws:ec2:ap-south-1:431383113787:instance/i-0cb462e74168f7c23). The right sidebar shows 'Elastic IP addresses' (None), 'AWS Compute Optimizer finding' (Opt-in to AWS Compute Optimizer for recommendations), and 'Auto Scaling Group name' (None). The footer contains 'CloudShell', 'Feedback', 'Console Mobile App', '© 2026, Amazon Web Services, Inc. or its affiliates.', 'Privacy', 'Terms', and 'Cookie preferences'.

EC2 / INSTANCES / i-0cb462e74168f7c23

Instance summary for i-0cb462e74168f7c23 (LinuxWebServer) Info

Updated less than a minute ago

Instance ID
i-0cb462e74168f7c23

Public IPv4 address
3.111.41.91 | [open address](#)

Instance state
Running

Private IPv4 address
172.31.8.6

Public DNS

Private IP DNS name (IPv4 only)
ip-172-31-8-6.ap-south-1.compute.internal

Hostname type
IP name: ip-172-31-8-6.ap-south-1.compute.internal

Answer private resource DNS name
IPV4 (A)

Auto-assigned IP address
3.111.41.91 [Public IP]

Instance type
t2.micro

VPC ID
vpc-09a179aa942914327

Subnet ID
subnet-09fbeb7419b40b21a

Instance ARN
arn:aws:ec2:ap-south-1:431383113787:instance/i-0cb462e74168f7c23

Elastic IP addresses
-

AWS Compute Optimizer finding
Opt-in to AWS Compute Optimizer for recommendations. | [Learn more](#)

Auto Scaling Group name
-

Managed
false

Instance diagnostics

- Instance diagnostics
- Instance settings
- Networking
- Security
- Image and templates
- Storage
- Monitor and troubleshoot

Actions

- Create image
- Create template from instance
- Launch more like this

EC2

- Dashboard
- AWS Global View
- Events
- Instances
 - Instances
 - Instance Types
 - Launch Templates
 - Spot Requests
 - Savings Plans
 - Reserved Instances
 - Dedicated Hosts
 - Capacity Reservations
 - Capacity Manager [New](#)
- Images
 - AMIs
 - AMI Catalog
- Elastic Block Store
 - Volumes
 - Snapshots
 - Lifecycle Manager
- Network & Security

CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

EC2 / INSTANCES / i-0cb462e74168f7c23 / Create image

Create image Info

An image (also referred to as an AMI) defines the programs and settings that are applied when you launch an EC2 instance. You can create an image from the configuration of an existing instance.

Instance ID
i-0cb462e74168f7c23 (LinuxWebServer)

Image name
server-backup-purpose
Maximum 127 characters. Can't be modified after creation.

Image description - optional
Image description
Maximum 255 characters

Reboot instance
When selected, Amazon EC2 reboots the instance so that data is at rest when snapshots of the attached volumes are taken. This ensures data consistency.

Instance volumes

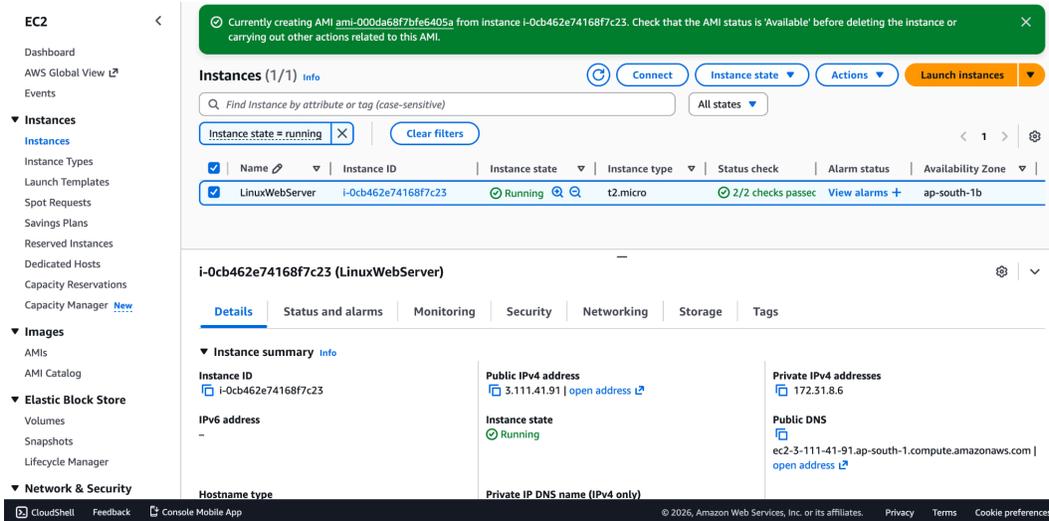
Storage type	Device	Snapshot	Size	Volume type	IOPS	Throughput	Delete on termination	Encrypted
E...	/...	Create new sna...	8	EBS General Pur...	3000		<input checked="" type="checkbox"/> Enable <input type="checkbox"/> Enable	

[Add volume](#)

EC2

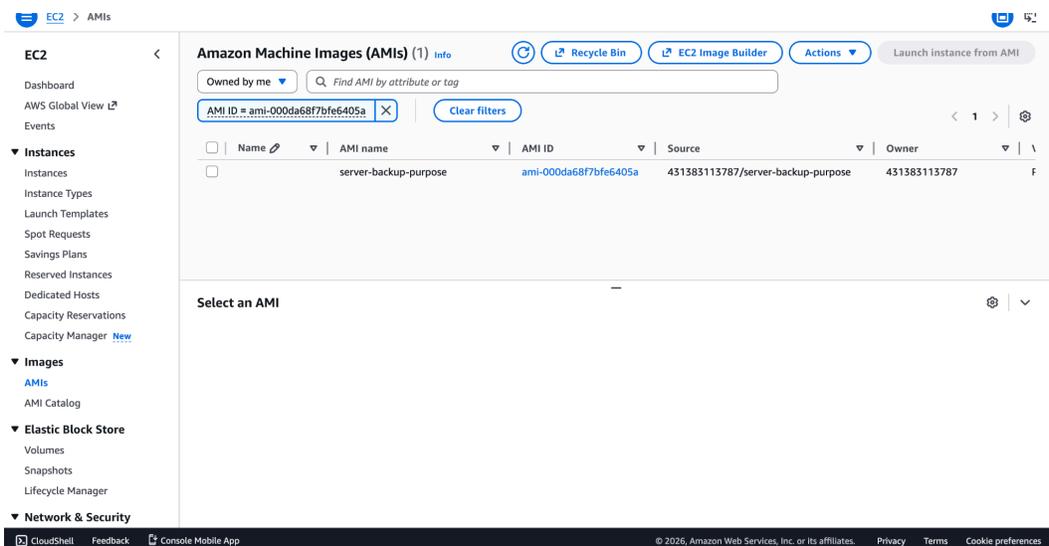
- Dashboard
- AWS Global View
- Events
- Instances
 - Instances
 - Instance Types
 - Launch Templates
 - Spot Requests
 - Savings Plans
 - Reserved Instances
 - Dedicated Hosts
 - Capacity Reservations
 - Capacity Manager [New](#)
- Images
 - AMIs
 - AMI Catalog
- Elastic Block Store
 - Volumes
 - Snapshots
 - Lifecycle Manager
- Network & Security

CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences



Launch a New EC2 Instance from the Created AMI

1. Go to EC2 Dashboard → AMIs
2. Select your newly created AMI
3. Click **Launch instance from AMI**
4. Configure the following settings:
 Instance type (e.g., t3.micro)
 Key pair
 Security group
 VPC and Subnet
5. Click **Launch instance**



EC2 > AMIs

Amazon Machine Images (AMIs) (1/1) Info

Owned by me Find AMI by attribute or tag

AMI ID = ami-000da68f7bfe6405a Clear filters

<input checked="" type="checkbox"/>	Name	AMI name	AMI ID	Source	Owner
<input checked="" type="checkbox"/>	server-backup-purpose	server-backup-purpose	ami-000da68f7bfe6405a	431383113787/server-backup-purpose	431383113787

Launch an instance Info

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags Info

Name: [Add additional tags](#)

Application and OS Images (Amazon Machine Image) Info

An AMI contains the operating system, application server, and applications for your instance. If you don't see a suitable AMI below, use the search field or choose [Browse more AMIs](#).

[AMI from catalog](#) Recents My AMIs Quick Start

Name
server-backup-purpose

Description
-

Image ID
ami-000da68f7bfe6405a

Username (Check with the AMI provider.)

[Browse more AMIs](#)
Including AMIs from AWS, Marketplace and the Community

Summary

Number of instances Info

Software Image (AMI)
server-backup-purpose
ami-000da68f7bfe6405a

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

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

Free tier: In your first year of opening an AWS account, you get 750 hours per month of t2.micro instance usage (or t3.micro where t2.micro isn't available) when used with free tier AMIs, 750 hours per month of public IPv4 address usage, 30 GiB of EBS storage, 2 million I/Os, 1 GB of ena network, and 100 GB

[Cancel](#) [Launch instance](#) [Preview code](#)

Success
Successfully initiated launch of instance (i-07f18cf798df65144)

► **Launch log**

Next Steps

< 1 2 3 4 5 6 >

Create billing and free tier usage alerts

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

[Create billing alerts](#)

Connect to your instance

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

[Connect to instance](#)

[Learn more](#)

Connect an RDS database

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

[Connect an RDS database](#)

[Create a new RDS database](#)

[Learn more](#)

Create EBS snapshot policy

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

[Create EBS snapshot policy](#)

Manage detailed monitoring

Enable or disable detailed monitoring for the instance. If you enable detailed monitoring, the Amazon EC2 console displays monitoring

Create Load Balancer

Create an application, network gateway or classic Elastic Load Balancer

Create AWS budget

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

Manage CloudWatch alarms

Create or update Amazon CloudWatch alarms for the instance.

EC2 > Instances

Instances (1/2) Info

Find Instance by attribute or tag (case-sensitive) All states

Instance state = running Clear filters

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
<input checked="" type="checkbox"/>	instance-from...	i-07f18cf798df65144	Running	t2.micro	Initializing	View alarms +	ap-south-1b
<input type="checkbox"/>	LinuxWebServer	i-0cb462e74168f7c23	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b

i-07f18cf798df65144 (instance-from-ami)

Details | Status and alarms | Monitoring | Security | Networking | Storage | Tags

Instance summary Info

Instance ID i-07f18cf798df65144	Public IPv4 address 3.109.121.219 open address	Private IPv4 addresses 172.31.3.171
IPv6 address -	Instance state Running	Public DNS ec2-3-109-121-219.ap-south-1.compute.amazonaws.com open address
Hostname type	Private IP DNS name (IPv4 only)	

CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

EC2 > Instances

Instance summary for i-07f18cf798df65144 (instance-from-ami) Info

Updated less than a minute ago

Instance ID i-07f18cf798df65144	Public IPv4 address 3.109.121.219 open address	Private IPv4 addresses 172.31.3.171
IPv6 address -	Instance state Running	Public DNS ec2-3-109-121-219.ap-south-1.compute.amazonaws.com open address
Hostname type IP name: ip-172-31-3-171.ap-south-1.compute.internal	Private IP DNS name (IPv4 only) ip-172-31-3-171.ap-south-1.compute.internal	Elastic IP addresses -
Answer private resource DNS name IPv4 (A)	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto-assigned IP address 3.109.121.219 [Public IP]	VPC ID vpc-09a179aa942914327	Auto Scaling Group name -
IAM role -	Subnet ID subnet-09fbeb7419b40b21a	Managed false
IMDSv2 Required	Instance ARN arn:aws:ec2:ap-south-1:431383113787:instance/i-07f18cf798df65144	
Operator -		

CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

PRACTICAL NO. 6

AIM: To monitor an EC2 instance using Amazon CloudWatch and create an alarm based on CPU utilization.

THEORY:

Amazon CloudWatch is a monitoring and observability service that provides:

- Metrics (CPU, Network, Disk, etc.)
- Logs
- Alarms
- Dashboards
- Events

CloudWatch collects default metrics from EC2 automatically. An Alarm monitors a metric and performs an action (like sending notification) when a threshold is breached.

Create CloudWatch Alarm for EC2 → Steps:

1. Go to AWS Console
2. Open CloudWatch
3. Click Alarms
4. Click Create alarm
5. Click Select metric
6. Choose:
 - EC2
 - Per-Instance Metrics
7. Select CPU Utilization
8. Click Select metric
9. Configure condition:
 - Threshold type → Static
 - Whenever CPUUtilization is:
 - Greater than 70%
10. Click Next
11. Configure notification:
 - Create new SNS topic
 - Enter email address
12. Click Create topic
13. Confirm email subscription
14. Click Next
15. Name the alarm

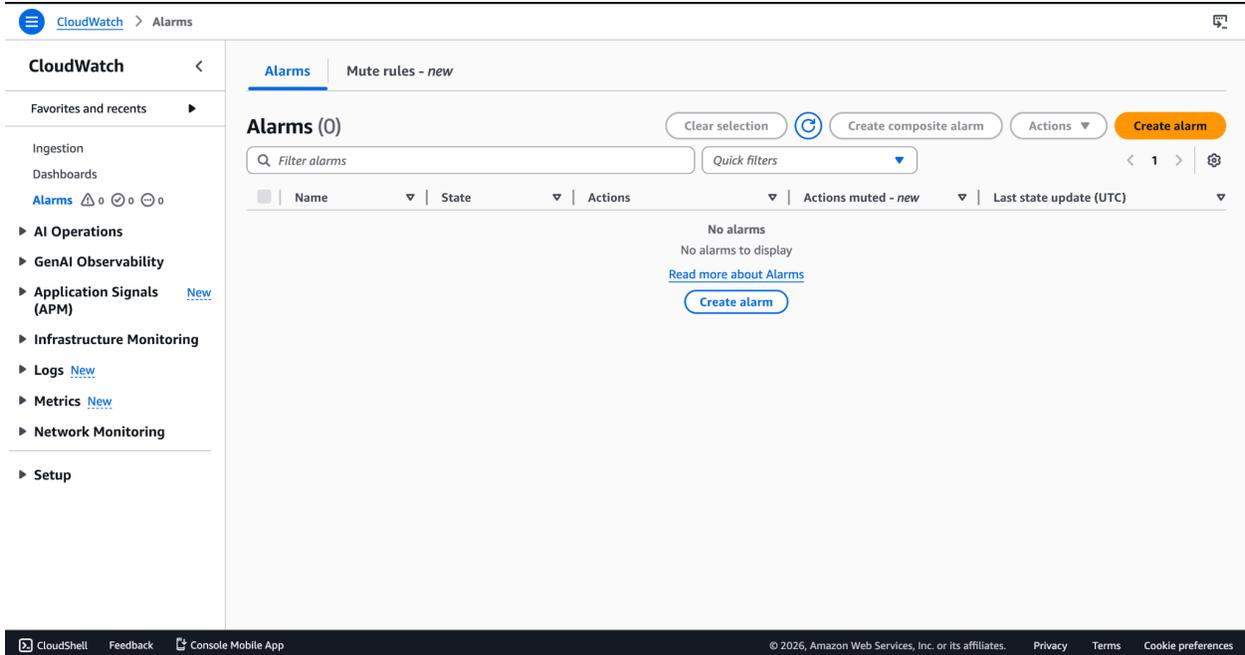
16. Click Create alarm

EC2 instance → Running State

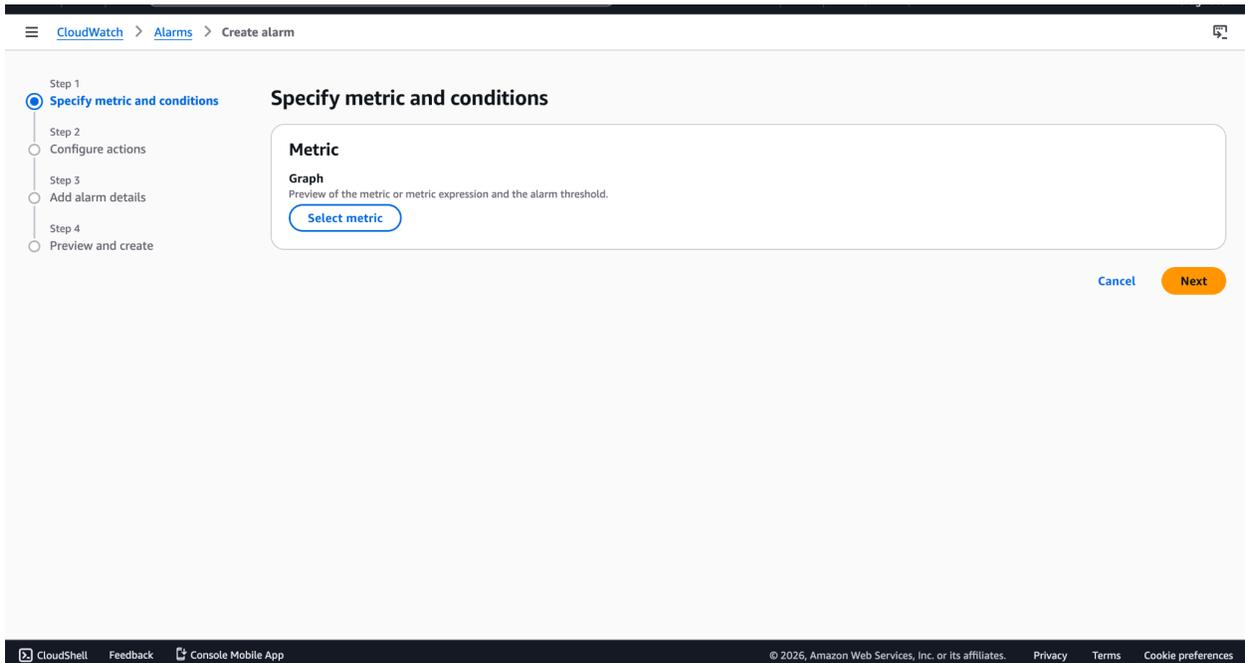
The screenshot shows the AWS Management Console interface for EC2 instances. The left sidebar contains navigation options for EC2, Images, Elastic Block Store, and Network & Security. The main content area displays a list of instances with a table containing columns for Name, Instance ID, Instance state, Instance type, Status check, Alarm status, and Availability Zone. One instance, 'CloudWatch Pract', is highlighted with a blue row and shows a 'Running' state with '2/2 checks passed'. Below the table, the details for instance 'i-07f18cf798df65144' are shown, including its Instance ID, Public IPv4 address (3.109.121.219), Private IPv4 addresses (172.31.3.171), Instance state (Running), Public DNS (ec2-3-109-121-219.ap-south-1.compute.amazonaws.com), Private IP DNS name (ip-172-31-3-171.ap-south-1.compute.internal), and Hostname type (IP name: ip-172-31-3-171.ap-south-1.compute.internal).

Cloudwatch → Click Create Alarm

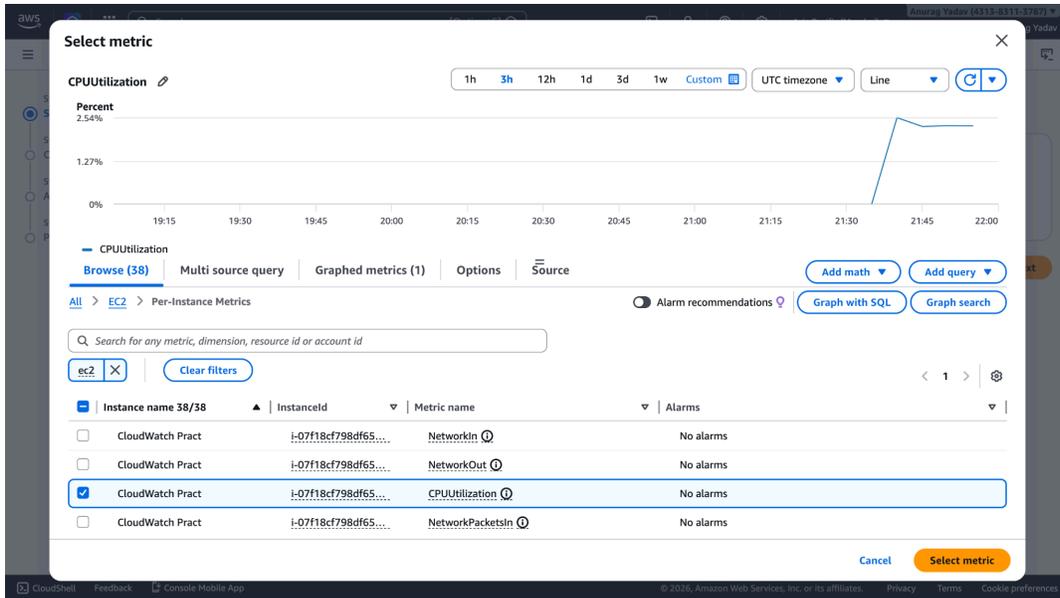
The screenshot shows the AWS CloudWatch console interface. The left sidebar contains navigation options for CloudWatch, Alarms, AI Operations, GenAI Observability, Application Signals (APM), Infrastructure Monitoring, Logs, Metrics, Network Monitoring, and Setup. The main content area displays the 'Overview' section with a 'Get started with CloudWatch' section. This section includes four cards: 'Set alarms on any of your metrics to receive notification when your metric crosses your specified threshold.' (with a 'Create alarms' link), 'Create and name any CloudWatch dashboard CloudWatch-Default to display it here.' (with a 'Create a default dashboard' link), 'Monitor using your existing system, application and custom log files.' (with a 'View logs' link), and 'Write rules to indicate which events are of interest to your application and what automated action to take.' (with a 'View events' link). Below this is a 'Get started with Observability solutions' section with an 'Explore observability solutions' link and three cards describing different observability solutions.



Click on Select Metric



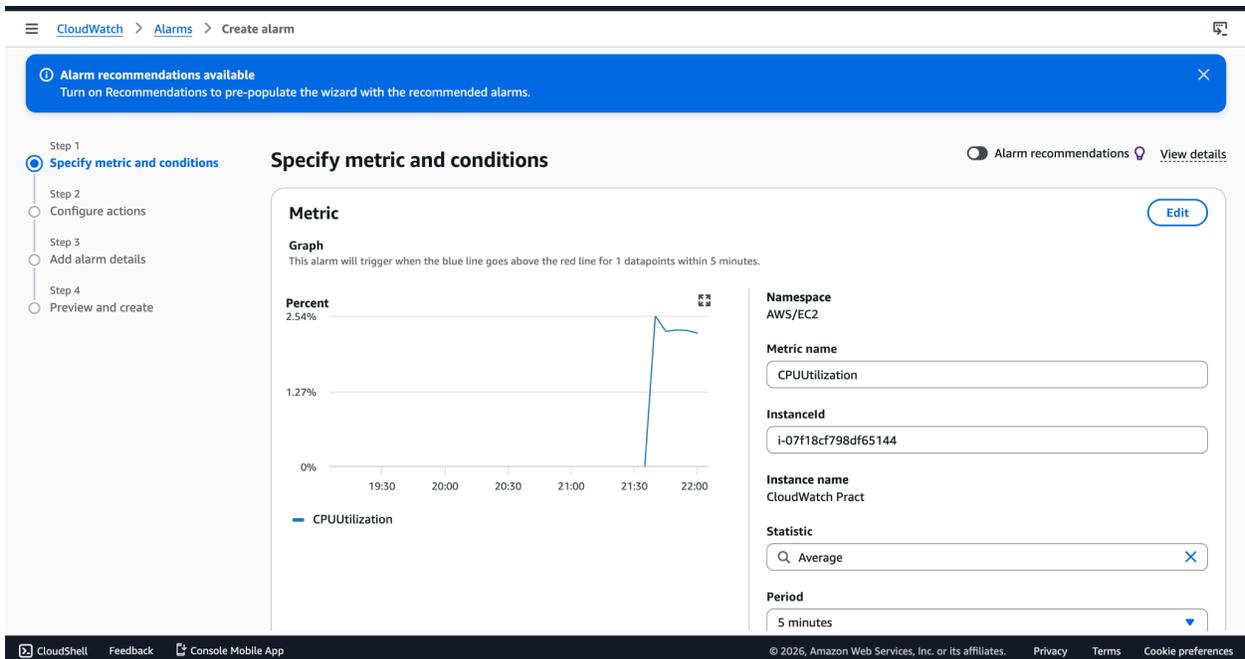
Choose EC2 → Per-Instance Metrics → CPUUtilization → select metric



CPU Configuration :

Threshold type → **Static**

CPUUtilization > 70 (e.g here i have choosen value as 2)



CloudWatch > Alarms > Create alarm

Conditions

Threshold type

Static
Use a value as a threshold

Anomaly detection
Use a band as a threshold

Whenever CPUUtilization is...
Define the alarm condition.

Greater
> threshold

Greater/Equal
>= threshold

Lower/Equal
<= threshold

Lower
< threshold

than...
Define the threshold value.

Must be a number.

Additional configuration

Datapoints to alarm
Define the number of datapoints within the evaluation period that must be breaching to cause the alarm to go to ALARM state.

out of

Missing data treatment
How to treat missing data when evaluating the alarm.

Cancel **Next**

CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Configure Notification SNS

CloudWatch > Alarms > Create alarm

Alarm recommendations available
Turn on Recommendations to pre-populate the wizard with the recommended alarms.

Step 1: Specify metric and conditions
 Step 2: **Configure actions**
 Step 3: Add alarm details
 Step 4: Preview and create

Configure actions

Notification

Alarm state trigger
Define the alarm state that will trigger this action.

In alarm
The metric or expression is outside of the defined threshold.

OK
The metric or expression is within the defined threshold.

Insufficient data
The alarm has just started or not enough data is available.

Send a notification to the following SNS topic
Define the SNS (Simple Notification Service) topic that will receive the notification.

Select an existing SNS topic

Create new topic

Use topic ARN to notify other accounts

Create a new topic...
The topic name must be unique.

SNS topic names can contain only alphanumeric characters, hyphens (-) and underscores (_).

Email endpoints that will receive the notification...
Add a comma-separated list of email addresses. Each address will be added as a subscription to the topic above.

user1@example.com, user2@example.com

Create topic

Add notification

Lambda action

Add Lambda action

CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Confirm the subscription from the mail

The screenshot shows a Gmail interface with a browser window open to a confirmation page. The email in the inbox is titled "AWS Notification - Subscription Confirmation" and is from "AWS Notifications". The subject line is "arn:aws:sns:eu-north-1:77126824081:EC2-CPU-Alerts". The email body contains the following text:

You have chosen to subscribe to the topic:
arn:aws:sns:eu-north-1:77126824081:EC2-CPU-Alerts

To confirm this subscription, click or visit the link below (If this was in error no action is necessary):
[Confirm subscription](#)

Please do not reply directly to this email. If you wish to remove yourself from receiving all future SNS subscription confirmation requests please send an email to [sns-opt-out](#)

At the bottom of the email, there are buttons for "Reply", "Forward", and a "Gmail" icon. A notification banner at the bottom of the browser window says "Enable desktop notifications for Gmail. OK No thanks X".

sns.ap-south-1.amazonaws.com/confirmation.html?TopicArn=arn:aws:sns:ap-south-1:431383113787:Practica



Simple Notification Service

Subscription confirmed!

You have successfully subscribed.

Your subscription's id is:

arn:aws:sns:ap-south-1:431383113787:Practica_l_6_SMS:e9fb548a-4146-45ad-a363-6a0f38907ef4

If it was not your intention to subscribe, [click here to unsubscribe](#).

Alarm recommendations available
Turn on Recommendations to pre-populate the wizard with the recommended alarms.

- Step 1 Specify metric and conditions
- Step 2 Configure actions
- Step 3 Add alarm details
- Step 4 Preview and create

Add alarm details

Name and description

Alarm name

EC2-CPU-HIGH-ALERT

Alarm description - optional [View formatting guidelines](#)

Edit **Preview**

This is the Practical 6 practice.

Up to 1024 characters (55/1024).

Markdown formatting is only applied when viewing your alarm in the console. The description will remain in plain text in the alarm notifications.

Tags - optional [Info](#)

No tags associated with the resource.

[Add new tag](#)

You can add up to 50 tags.

- Step 1 Specify metric and conditions
- Step 2 Configure actions
- Step 3 Add alarm details
- Step 4 **Preview and create**

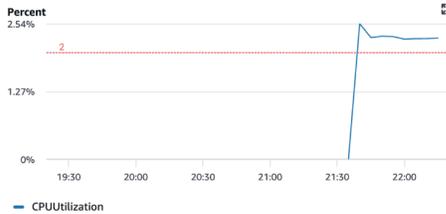
Preview and create

[Edit](#)

Step 1: Specify metric and conditions

Metric

Graph
This alarm will trigger when the blue line goes above the red line for 1 datapoints within 5 minutes.



Namespace

AWS/EC2

Metric name

CPUUtilization

InstanceId

i-07f18cf798df65144

Instance name

CloudWatch Pract

Statistic

Average

Period

5 minutes

Conditions

Threshold type
Static

Whenever CPUUtilization is
Greater (>)

Step 2: Configure actions Edit

Actions

Notification
When In alarm, send a notification to "Practical_6_SMS"

Step 3: Add alarm details Edit

Alarm details

Name
EC2-CPU-HIGH-ALERT

Description
#This is the test message sent from the AWS for the High Alert by Anurag Yadav - 4519

Tags (0)

Markdown formatting is only applied when viewing your alarm in the console. The description will remain in plain text in the alarm notifications.

Cancel Previous Create alarm

- Favorites and recents
- Ingestion
- Dashboards
- Alarms 0 0 0 0
- AI Operations
- GenAI Observability
- Application Signals (APM) New
- Infrastructure Monitoring
- Logs New
- Metrics New
- Network Monitoring
- Setup

Successfully created alarm EC2-CPU-HIGH-ALERT. View alarm

Alarms | Mute rules - new

Alarms (1) Clear selection Create composite alarm Actions Create alarm

Quick filters < 1 >

<input type="checkbox"/>	Name	State	Actions	Actions muted - new	Last state update (UTC)
<input type="checkbox"/>	EC2-CPU-HIGH-ALERT	Insufficient data	Actions enabled	-	2026-02-17 22:22:49

CloudWatch > Alarms > EC2-CPU-HIGH-ALERT

CloudWatch

Favorites and recents

Ingestion

Dashboards

Alarms ▲ 1 ● 0 ● 0

▶ AI Operations

▶ GenAI Observability

▶ Application Signals (APM)

▶ Infrastructure Monitoring

▶ Logs [New](#)

▶ Metrics

▶ Network Monitoring

▶ Setup

Alarms (1)

Filter alarms

Hide Auto Scaling alarms

< 1 >

EC2-CPU-HIGH-ALERT

Metric alarm

▲ In alarm

EC2-CPU-HIGH-ALERT

Actions View Explore related Investigate

3h 1d 1w UTC timezone

Graph

CPUUtilization

CPUUtilization > 2 for 1 datapoints within 5 minutes ▲ In alarm

Legend: ● In alarm ● OK ● Insufficient data ■ Disabled/Muted actions

CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

CloudWatch

CloudWatch

Favorites and recents

Ingestion

Dashboards

Alarms ▲ 1 ● 0 ● 0

▶ AI Operations

▶ GenAI Observability

▶ Application Signals (APM)

▶ Infrastructure Monitoring

▶ Logs [New](#)

▶ Metrics

▶ Network Monitoring

▶ Setup

Overview info

Overview Filter by resource group info Actions

Alarms by AWS service info

Services ■ In alarm 1 ■ Insufficient data 0 ■ OK 0

EC2 ■ ▲ (1)

Recent alarms info [View recent alarms dashboard](#)

EC2-CPU-HIGH-ALERT

Percent

2.54%

CPUUtilization > 2 for 1 datapoints

CPUUtilization

Default Dashboard

Name any CloudWatch dashboard CloudWatch-Default to display it here. [Create a new default dashboard](#)

Application Insights

[Get started with Application Insights](#) info [Configure Application Insights](#)

Set up monitors and dashboards to detect issues and resolve problems with enterprise applications, databases, and workloads.

CloudShell Feedback Console Mobile App © 2026, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

The screenshot shows the AWS Management Console interface for EC2 instances. On the left, there is a navigation menu with categories like EC2, Images, Elastic Block Store, and Network & Security. The main content area displays a table of instances:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
CloudWatch Pract	i-07f18cf798df65144	Running	t2.micro	2/2 checks passed	1 in alarm	ap-south-1b
LinuxWebServer	i-0cb462e74168f7c23	Terminated	t2.micro	-	-	ap-south-1b

An "Alarm details for i-07f18cf798df65144" modal is open, showing the following information:

Name	State	Description	Metric name	State reason
EC2-CPU-HIGH-ALERT	ALARM	#This is the test message sent from...	CPUUtilization	Threshold Crossed: 1 out of...

The modal also includes an "Instance summary" section with details like Instance ID, Public IPv4 address, Instance state (Running), and Hostname type.

The screenshot shows a Gmail email notification titled "ALARM: 'EC2-High-CPU-Alarm' in EU (Stockholm)". The email content includes:

ALARM: "EC2-High-CPU-Alarm" in EU (Stockholm)

AWS Notifications
to me

Sat, Feb 7, 9:34 AM

You are receiving this email because your Amazon CloudWatch Alarm "EC2-High-CPU-Alarm" in the EU (Stockholm) region has entered the ALARM state, because "Threshold Crossed: 1 out of the last 1 datapoints [15.422321901075128 (07/02/26 03:59:00)] was greater than the threshold (10.0) (minimum 1 datapoint for OK -> ALARM transition)." at "Saturday 07 February, 2026 04:04:34 UTC".

View this alarm in the AWS Management Console:
<https://eu-north-1.console.aws.amazon.com/cloudwatch/deeplink.js?region=eu-north-1#alarmsV2:alarm/EC2-High-CPU-Alarm>

Alarm Details:

- Name: EC2-High-CPU-Alarm
- Description:
- State Change: OK -> ALARM
- Reason for State Change: Threshold Crossed: 1 out of the last 1 datapoints [15.422321901075128 (07/02/26 03:59:00)] was greater than the threshold (10.0) (minimum 1 datapoint for OK -> ALARM transition).
- Timestamp: Saturday 07 February, 2026 04:04:34 UTC
- AWS Account: 771266824081
- Alarm Arn: arn:aws:cloudwatch:eu-north-1:771266824081:alarm:EC2-High-CPU-Alarm

Threshold:

- The alarm is in the ALARM state when the metric is GreaterThanThreshold 10.0 for at least 1 of the last 1 period(s) of 300 seconds.

Monitored Metric:

- MetricNamespace: AWS/EC2
- MetricName: CPUUtilization
- Dimensions: [InstanceId = i-0d719f4a65058d84c]
- Period: 300 seconds
- Statistic: Average
- Unit: not specified
- TreatMissingData: missing

At the bottom, there is a notification: "Enable desktop notifications for Gmail. OK No thanks forward"

Conclusion: The CloudWatch monitoring and alarm configuration practical was performed successfully.