

## **Placement Empowerment Program**

### ***Cloud Computing and DevOps Centre***

**Use Cloud CLI Tools Install the CLI for your cloud provider (e.g., AWS CLI). Use it to list resources, upload files to storage, and manage VMs.**

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# Introduction and Overview

Cloud CLI tools, such as AWS CLI, allow users to interact with cloud services directly from the terminal, enabling automation and efficient resource management. This task involves installing the AWS CLI, configuring it with AWS credentials, and using it to perform basic operations like listing resources, uploading files to S3, and managing EC2 instances. CLI tools offer a faster and scriptable alternative to the AWS Management Console, improving productivity. By completing this task, you'll gain hands-on experience in cloud automation and resource control using command-line commands.

## Objective

The goal of this project is to:

1. Learn Cloud CLI Basics – Install and configure AWS CLI to interact with cloud resources using command-line commands.
2. Manage Cloud Resources – Use AWS CLI to list cloud resources, upload files to S3, and manage EC2 instances efficiently.
3. Enhance Automation Skills – Gain hands-on experience in automating cloud tasks, improving efficiency over manual AWS Management Console operations.

## Importance of Cloud CLI

**Hands-on Learning & Efficiency** – Cloud CLI provides direct interaction with cloud services, enabling faster and more efficient management compared to the web console.

**Automation & Scripting** – It allows users to automate repetitive tasks, such as resource provisioning and deployments, improving productivity.

**Remote Cloud Management** – With CLI tools, users can manage cloud resources from any terminal, making it ideal for DevOps, remote administration, and large-scale cloud operations.

# Step-by-Step Overview

## Step 1:

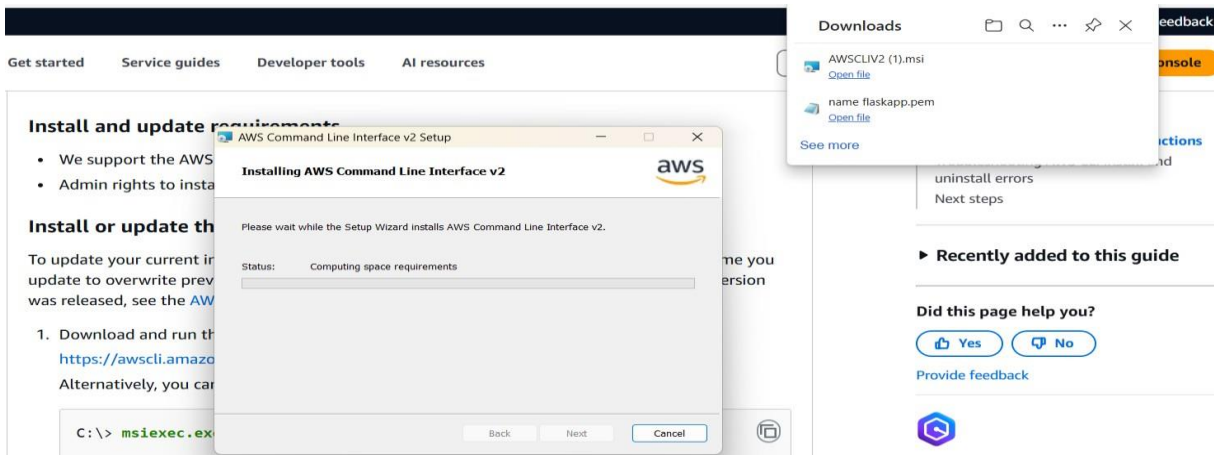
Search for "AWS CLI Installer for Windows" on Google and click the first link to access the official website.

The screenshot shows a Bing search results page for the query "aws cli installer for windows". The top result is from AWS Documentation, titled "Installing or updating to the latest version of the AWS CLI". Below the title, it says "Download and run the AWS CLI MSI installer for Windows (64-bit):" and provides a link to the AWS CLI MSI installer. To the right of the main results, there is a "Related searches" section with several suggestions: "download aws cli for window", "aws cli exe download", "aws cli commands cheat sheet", "aws cli zip download", "aws download cli", "install aws in windows", "aws download for windows", and "aws configure download". Below the main results, there is a section for "Videos of AWS CLI Installer For Windows" with a video thumbnail titled "How to install and configure the AWS CLI on Windows 10".

## Step 2:

Click on the "Install/Update" option located on the left-hand side of the Apache Lounge website. Select the link regarding your OS, Install by using the link provided else use the *msiexec* command

The screenshot shows the AWS Command Line Interface (CLI) User Guide for Windows. The left-hand navigation pane lists various topics, with "Install/Update" selected. The main content area is titled "Windows" and "Install and update requirements". It lists two requirements: "We support the AWS CLI on Microsoft-supported versions of 64-bit Windows." and "Admin rights to install software". Below this, it says "Install or update the AWS CLI" and provides instructions on how to update the current installation. It includes a link to the AWS CLI version 2 Changelog and a link to the GitHub repository. A code block shows the command to run the MSI installer using the *msiexec* command. The right-hand sidebar contains a section "On this page" with a link to "AWS CLI install and update instructions" and a section "Recently added to this guide".



## Step 3:

Once installed, verify the installation by opening Command Prompt (cmd) or PowerShell and running **aws --version**

It should return something like

aws-cli/2.x.x Python/3.x.x Windows/x86\_64

## Step 4:

Before using AWS CLI, you need to configure it with your AWS credentials.

Open Command Prompt and type **aws configure**

It will ask for:

AWS Access Key ID → Get it from AWS IAM > Security Credentials

AWS Secret Access Key → Get it from AWS IAM > Security Credentials

Default region name → Example: us-east-1 (Find yours in AWS Console)

Default output format → Keep it as json or press Enter for default

## Step 5:

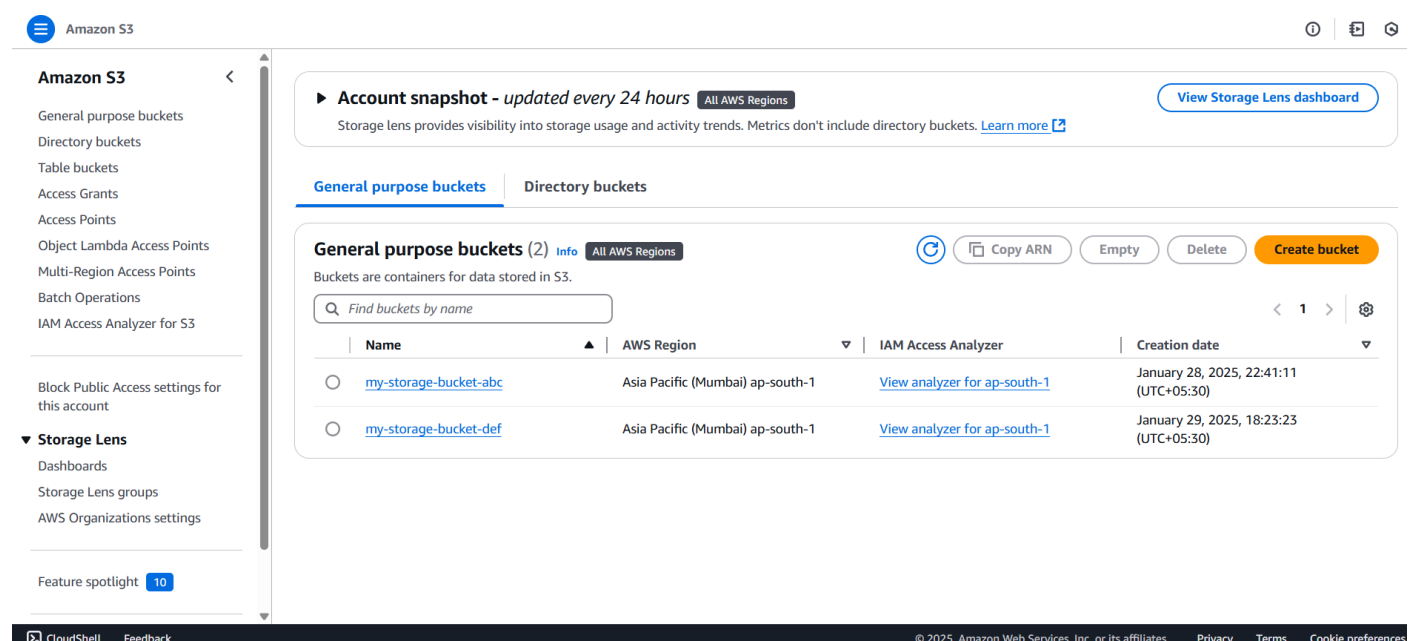
To see all storage buckets, Type **aws s3 ls** in cmd

To check running EC2 instances **aws ec2 describe-instances** in cmd

## Step 6:

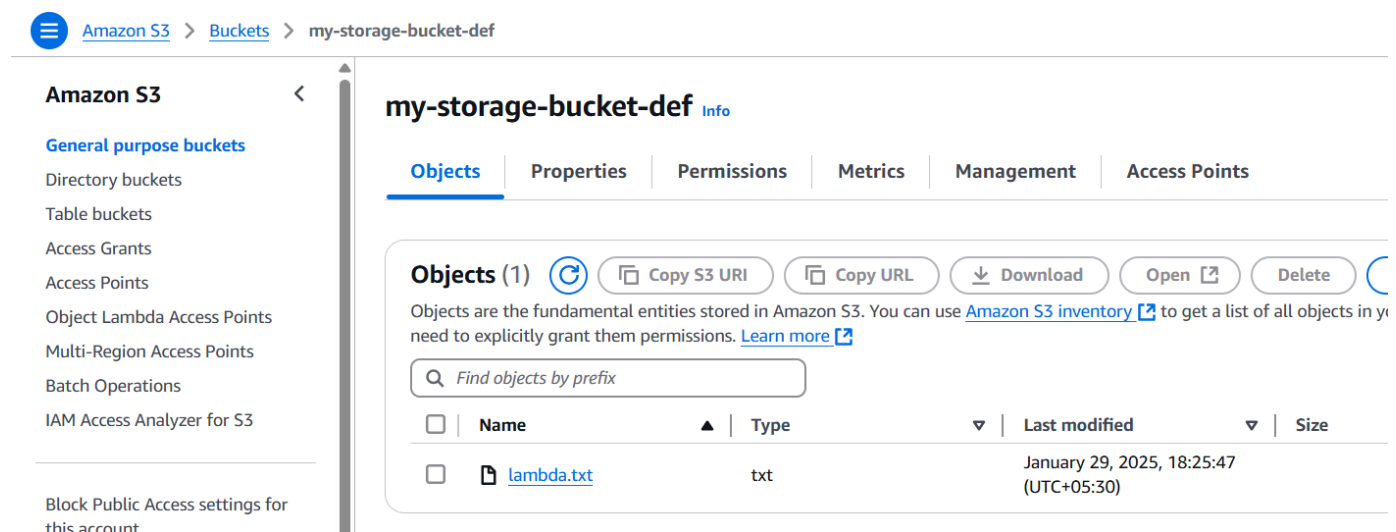
Create an S3 Bucket by typing **aws s3 mb s3://your-unique-bucket-name** in cmd.

Upload a file to S3 Bucket by typing **aws s3 cp yourfile.txt s3://your-unique-bucket-name/** in cmd



The screenshot shows the Amazon S3 console interface. On the left is a navigation sidebar with options like 'General purpose buckets', 'Directory buckets', 'Table buckets', 'Access Grants', 'Access Points', 'Object Lambda Access Points', 'Multi-Region Access Points', 'Batch Operations', 'IAM Access Analyzer for S3', 'Storage Lens', and 'Feature spotlight'. The main content area displays an 'Account snapshot' at the top, followed by tabs for 'General purpose buckets' and 'Directory buckets'. Under 'General purpose buckets', there are buttons for 'Copy ARN', 'Empty', 'Delete', and 'Create bucket'. Below these is a search bar 'Find buckets by name' and a table listing buckets. The table has columns for Name, AWS Region, IAM Access Analyzer, and Creation date. Two buckets are listed: 'my-storage-bucket-abc' and 'my-storage-bucket-def', both in the 'Asia Pacific (Mumbai) ap-south-1' region.

Name	AWS Region	IAM Access Analyzer	Creation date
<a href="#">my-storage-bucket-abc</a>	Asia Pacific (Mumbai) ap-south-1	<a href="#">View analyzer for ap-south-1</a>	January 28, 2025, 22:41:11 (UTC+05:30)
<a href="#">my-storage-bucket-def</a>	Asia Pacific (Mumbai) ap-south-1	<a href="#">View analyzer for ap-south-1</a>	January 29, 2025, 18:23:23 (UTC+05:30)



The screenshot shows the details page for the S3 bucket 'my-storage-bucket-def'. The left sidebar is the same as the previous screenshot. The main content area has tabs for 'Objects', 'Properties', 'Permissions', 'Metrics', 'Management', and 'Access Points'. The 'Objects' tab is active, showing a list of objects. At the top of the objects list are buttons for 'Copy S3 URI', 'Copy URL', 'Download', 'Open', and 'Delete'. Below these is a search bar 'Find objects by prefix' and a table listing objects. The table has columns for Name, Type, Last modified, and Size. One object is listed: 'lambda.txt' of type 'txt', last modified on 'January 29, 2025, 18:25:47 (UTC+05:30)'.

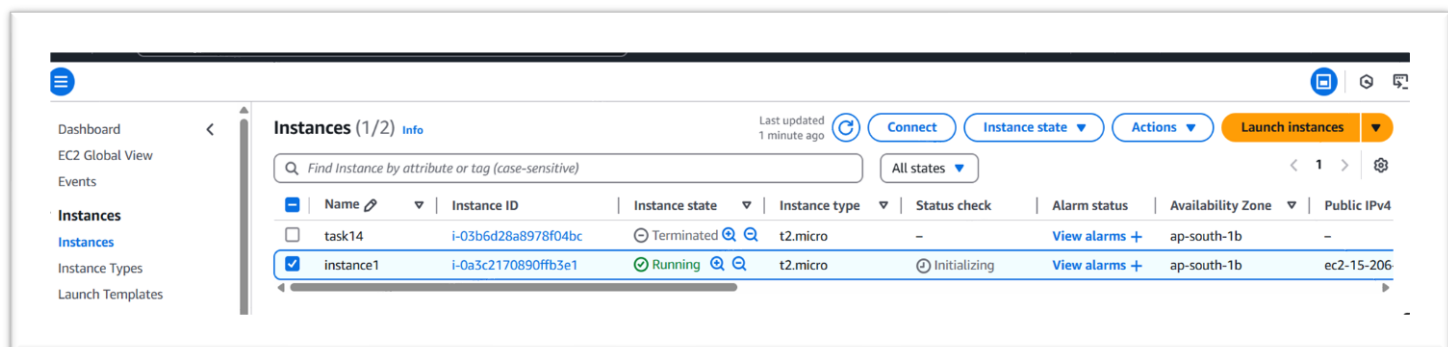
Name	Type	Last modified	Size
<a href="#">lambda.txt</a>	txt	January 29, 2025, 18:25:47 (UTC+05:30)	

## Step 7:

To Start an EC2 Instance, Type **aws ec2 start-instances --instance-ids <INSTANCE\_ID>** in cmd

Replace <INSTANCE\_ID> with your actual instance ID

```
{
  "StartingInstances": [
    {
      "InstanceId": "i-0a3c2170890ffb3e1",
      "CurrentState": {
        "Code": 0,
        "Name": "pending"
      },
      "PreviousState": {
        "Code": 80,
        "Name": "stopped"
      }
    }
  ]
}
```



## Expected Outcome

By completing this POC, you will:

1. **Successful Installation & Configuration** – AWS CLI will be installed and configured with the correct credentials, allowing seamless interaction with AWS services.
2. **Ability to List Cloud Resources** – You will be able to list AWS resources such as S3 buckets, EC2 instances, and IAM users using CLI commands.

3. ***File Management in S3*** – You will gain hands-on experience in uploading, downloading, and managing files in Amazon S3 using the CLI.
4. ***EC2 Instance Control*** – You will learn how to start, stop, and reboot EC2 instances from the command line, improving your cloud management skills.
5. ***Improved Automation Skills*** – By using CLI instead of the AWS Console, you will develop automation capabilities essential for DevOps and cloud computing.