

## **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.

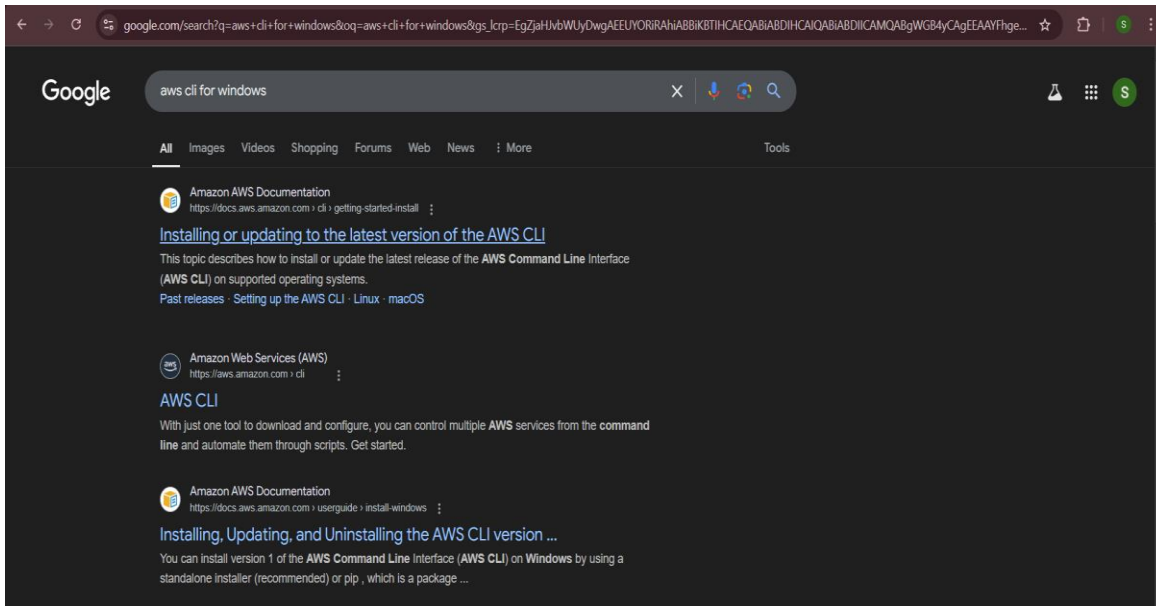
**Automation & Scripting** – It allows users to automate repetitive tasks, such as resource provisioning and deployments, improving productivity.

**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.



## 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

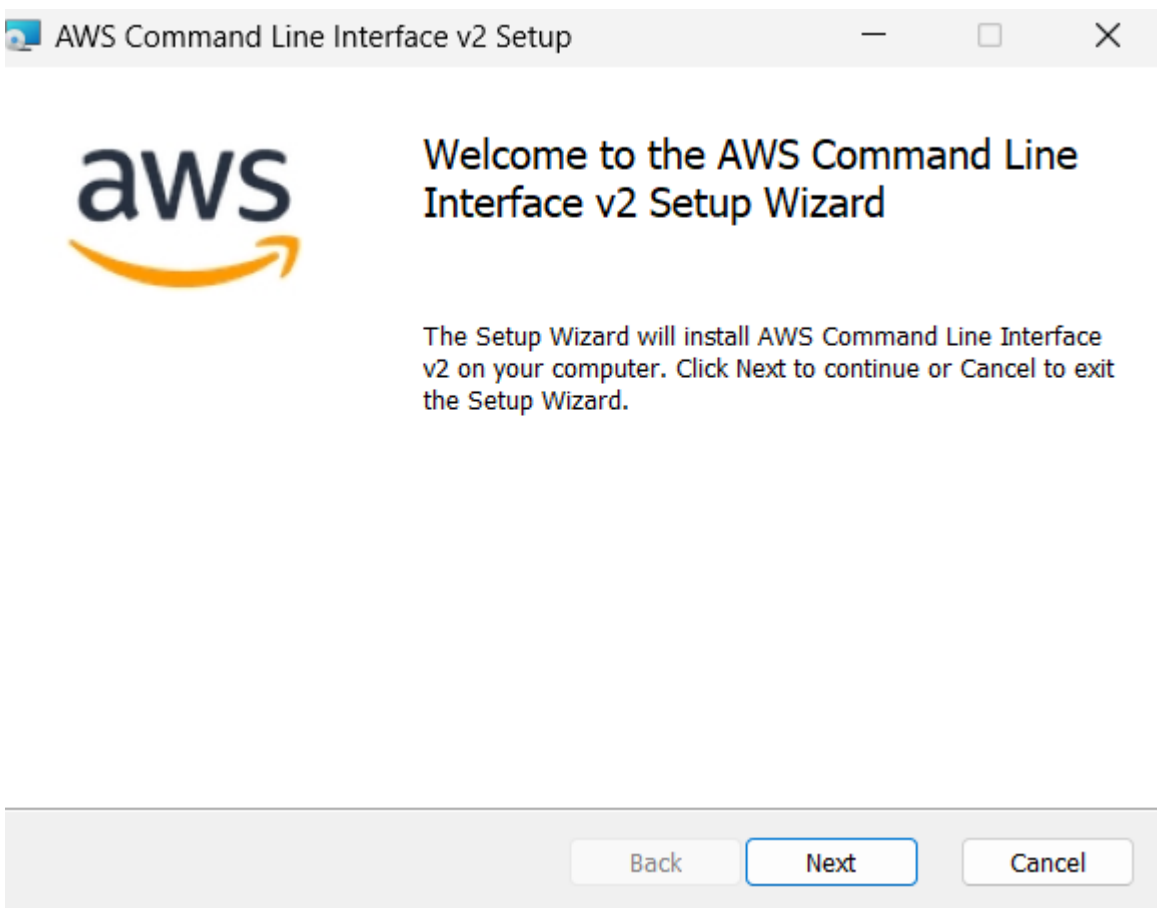
The screenshot shows the AWS Command Line Interface v2 Setup page. The left sidebar contains a navigation menu with links like 'About the AWS CLI', 'Get started', 'Prerequisites', 'Install/Update', 'Past releases', 'Build and install from source', 'Amazon ECR Public/Docker', 'Setup', 'Configure the AWS CLI', 'Authentication and access credentials', 'Using the AWS CLI', 'Code examples', 'Security', 'Troubleshoot errors', 'Migration guide', 'Uninstall', and 'Document History'. The main content area is titled 'Windows' and 'Install and update requirements'. It lists 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: 'To update your current installation of AWS CLI on Windows, download a new installer each time you update to overwrite previous versions. AWS CLI is updated regularly. To see when the latest version was released, see the [AWS CLI version 2 Changelog](#) on GitHub.' A numbered list follows: '1. Download and run the AWS CLI MSI installer for Windows (64-bit): <https://awscli.amazonaws.com/AWSCLIV2.msi>'. It also mentions an alternative command: 'Alternatively, you can run the `msiexec` command to run the MSI installer.' Two code blocks are shown: 

```
C:\> msiexec.exe /i https://awscli.amazonaws.com/AWSCLIV2.msi
```

 and 

```
C:\> msiexec.exe /i https://awscli.amazonaws.com/AWSCLIV2.msi /qn
```

. The right sidebar has a search bar, a 'Return to the Console' button, and sections for 'On this page' (with links to 'AWS CLI install and update instructions', 'Troubleshooting AWS CLI install and uninstall errors', and 'Next steps'), 'Recently added to this guide', and 'Did this page help you?' (with 'Yes' and 'No' buttons and a 'Provide feedback' link).



### 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://yourunique-bucket-name/** in cmd

Account snapshot - updated every 24 hours All AWS Regions [View Storage Lens dashboard](#)

Storage lens provides visibility into storage usage and activity trends. Metrics don't include directory buckets. [Learn more](#)

[General purpose buckets](#) | [Directory buckets](#)

**General purpose buckets** (2) Info All AWS Regions

Buckets are containers for data stored in S3.

[Copy ARN](#) [Empty](#) [Delete](#) [Create bucket](#)

Name	AWS Region	IAM Access Analyzer	Creation date
<a href="#">sylv1</a>	US East (N. Virginia) us-east-1	<a href="#">View analyzer for us-east-1</a>	February 7, 2025, 19:23:40 (UTC+05:30)
<a href="#">sylv2</a>	US East (N. Virginia) us-east-1	<a href="#">View analyzer for us-east-1</a>	February 7, 2025, 19:24:08 (UTC+05:30)

[Amazon S3](#) > [Buckets](#) > [sylv1](#)

**sylv1** Info

[Objects](#) | [Metadata](#) | [Properties](#) | [Permissions](#) | [Metrics](#) | [Management](#) | [Access Points](#)

**Objects** (1) Copy S3 URI Copy URL Download Open 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](#)

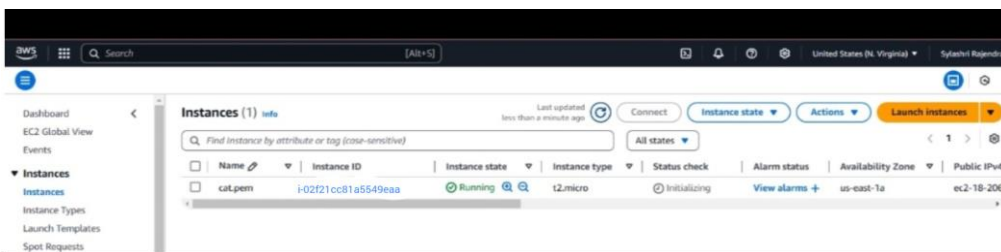
Name	Type	Last modified	Size	Storage class
<a href="#">cat.pem</a>	pem	February 7, 2025, 19:24:40 (UTC+05:30)	1.6 KB	Standard

## 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

```
{
  "Starting Instances": [
    {
      "Instance Id": "i-02f21cc81a5549eaa",
      "Current State": {
        "Code": 0,
        "Name": "pending"
      },
      "Previous State": {
        "Code": 80,
        "Name": "stopped"
      }
    }
  ]
}
```



## 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.