

◆ Get unlimited access to the best of Medium for less than \$1/week. [Become a member](#)



AWS CLI— Know its Applications and Benefits



Vishal Padghan · [Follow](#)

Published in Edureka · 8 min read · Feb 9, 2019



3



AWS CLI — Edureka

Amazon Web Services(AWS) is the market leader and top innovator in the field of cloud computing. It helps companies with a wide variety of workloads such as game development, data processing, warehousing, archive, development and many more. But, there is more to AWS than just the eye-catching browser console. It's time that you check out Amazon's Command Line Interface — AWS CLI.

Before digging in, let's take a look at the topics covered in this article.

- What Is AWS CLI ?
- Uses of AWS CLI
- Installing AWS CLI
- How to use AWS CLI?

What is AWS CLI?

AWS Command Line Interface(AWS CLI) is a unified tool using which, you can manage and monitor all your AWS services from a terminal session on your client.

Although most AWS services can be managed through the AWS Management Console or via the APIs, there is a third way that can be very useful: the Command Line Interface (AWS CLI). AWS has made it possible for Linux, MacOS, and Windows users to manage the main AWS services from a local terminal session's command line. So, with a single step installation and minimal configuration, you can start using all of the functionalities provided by the AWS Management Console using the terminal program. That would be:

- **Linux shells:** You can use command shell programs like bash, tsch and zsh to run commands in operating systems like Linux, macOS, or Unix
- **Windows Command Line:** On Windows, you can run commands in PowerShell or in the Windows command prompt
- **Remotely:** You can run commands on Amazon EC2 instances through a remote terminal such as PuTTY or SSH. You can even use AWS Systems Manager to automate operational tasks across your AWS resources

Apart from this, it also provides direct access to AWS services public APIs. In addition to the low-level API equivalent commands, the AWS CLI offers customization for several services.

This article will tell you everything that you need to know to get started with the AWS Command Line Interface and to use it proficiently in your daily operations.

Uses of AWS CLI

Listed below are a few reasons which are compelling enough to get you started with AWS Command Line Interface.

Easy Installation



Before AWS CLI was introduced, the installation of toolkits like old AWS API involved too many complex steps. Users had to set up multiple environment variables. But the installation of AWS Command Line Interface is quick, simple and standardized.

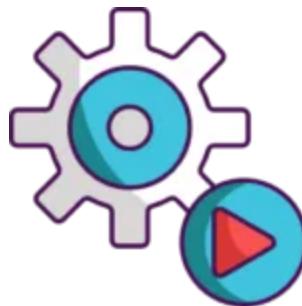
Saves Time



Despite being user-friendly, AWS Management Console is quite a hassle sometimes. Suppose you are trying to find a large

Amazon S3 folder. You have to log in to your account, search for the right S3 bucket, find the right folder and look for the right file. But with AWS CLI, if you know the right command the entire tasks will take just a few seconds.

Automates Processes



AWS CLI gives you the ability to automate the entire process of controlling and managing AWS services through scripts. These scripts make it easy for

users to fully automate cloud infrastructure.

Supports all Amazon Web Services



Prior to AWS CLI, users needed a dedicated CLI tool for just the EC2 service. It worked properly, but it didn't let users control other Amazon Web Services, like for instance the AWS RDS (Relational Database Service). But, AWS CLI lets you control *all* the services from one simple tool.

So now that we have understood what AWS CLI is let's get started with the installation process.

Installing AWS CLI

AWS Command Line Interface can be installed in three ways:

- Using pip
- Using a virtual environment
- Using a bundled installer

In this article, we will see how to install AWS CLI using pip.

Prerequisites

1. Python 2 version 2.6.5+ or Python 3 version 3.3+
2. Windows, Linux, macOS, or Unix Operating System

Installing the AWS CLI Using pip

The common way to install AWS CLI is using pip. pip is a package management system which is used to install and manage software packages written in Python.

Step 1: Install pip (on Ubuntu OS)

```
$ sudo apt install python3-pip
```

Step 2: Install CLI

```
$ pip install awscli --upgrade --user
```

Step 3: Check installation

```
$ aws --version
```

Once you are sure that AWS CLI is successfully installed, you need to configure it to start accessing your AWS Services through AWS CLI.

Configure AWS CLI

Step 4: Use the below command to configure AWS CLI

```
$ aws configure
AWS Access Key ID [None]: AKI*****
AWS Secret Access Key [None]: wJalr*****
Default region name [None]: us-west-2
Default output format [None]: json
```

As a result of the above command, the AWS CLI will prompt you for four pieces of information. The first two are required. Those are your AWS Access Key ID and AWS Secret Access Key, which serve as your account credentials. The other information that you will need is region and output format, which you can leave as default for time being.

NOTE: You can generate new credentials within AWS Identity and Access Management (IAM) if you do not already have them.

All set! You are ready to start using AWS CLI now. Let's check out how powerful AWS CLI can be with help of few basic examples.

How to use AWS CLI?

Suppose you have got some services running on AWS and you made it happen using the AWS Management console. The exact same work can be done, but with a whole lot less effort using Amazon Command Line Interface.

Here's a demonstration,

Let's say you want to launch an Amazon Linux instance from EC2.

If you wish to use AWS Management Console, to launch an instance, you'll need to:

- Load the EC2 Dashboard
- Click *Launch Instance*
- Select AMI and instance types of choice
- Set network, life cycle behavior, IAM, and user data settings on the Configure Instance Details page
- Select storage volumes on the Add Storage page
- Add tags on the Add Tags page
- Configure a security group on the Configure Security Group page
- Finally, review and launch the instance

And, don't forget the pop up where you'll confirm your key pair and then head back to the EC2 Instance dashboard to get your instance data. This doesn't sound that bad, but imagine doing it all when working with a slow internet connection or if you have to launch multiple instances of different variations multiple times. It would take a lot of time and effort, wouldn't it?

Now, let's see how to do the same task by using AWS CLI.

Step 1: Creating a new IAM user using AWS CLI

Let's see how to create a new IAM group and a new IAM user & then add the user to the group using AWS Command Line Interface

- First, use *create-group* to create a new IAM group

```
$ aws iam create-group --group-name mygroup
```

- Use *create-user* to create a new user

```
$ aws iam create-user --user-name myuser
```

- Then add the user to the group using *add-user-to-group* command

```
$ aws iam add-user-to-group --user-name myuser --group-name myiamgroup
```

- Finally, assign a policy (which is saved in a file) to the user by using command *put-user-policy*

```
$ aws iam put-user-policy --user-name myuser --policy-name mypoweruserrole --policy-document file://MyPolicyFile.json
```

- If you want to create a set of access keys for an IAM user, use the command *create-access-key*

```
$ aws iam create-access-key --user-name myuser
```

Step 2: Launching Amazon Linux instance using AWS CLI

Just like when you launch an EC2 instance using AWS Management Console, you need to create a key pair and security group before launching an instance

- Use the command `create-key-pair` to create a key pair & use `-query` option to pipe your key directly into a file

```
$ aws ec2 create-key-pair --key-name mykeypair --query 'KeyMaterial' --output text > mykeypair.pem
```

- Then create a security group and add rules to the security group

```
$ aws ec2 create-security-group --group-name mysecurityg --description "My security group"
```

```
$ aws ec2 authorize-security-group-ingress --group-id sg-903004f8 --protocol tcp --port 3389 --cidr 203.0.113.0/24
```

- Finally, launch an EC2 instance of your choice using the command `run-instance`

```
$ aws ec2 run-instances --image-id ami-09ae83da98a52eedf --count 1 --instance-type t2.micro --key-name MyKeyPair --security-group-ids sg-903004f8
```

There appears to be a lot of commands, but you can achieve the same result by combining all these commands into one and then save it as a script. That way you can modify and run the code whenever necessary, instead of starting from the first step, like when using AWS Management Console. This can drop a five-minute process down to a couple of seconds.

So, now you know how to use AWS CLI to create an IAM user and launch an EC2 instance of your choice. But AWS CLI can do much more.

So folks, that's an end to this article on AWS CLI. If you wish to check out more articles on the market's most trending technologies like Artificial Intelligence, DevOps, Ethical Hacking, then you can refer to [Edureka's official site.](#)

Do look out for other articles in this series which will explain the various other aspects of AWS.

1. [AWS Tutorial](#)
2. [AWS EC2](#)
3. [AWS Lambda](#)
4. [AWS Elastic Beanstalk](#)
5. [AWS S3](#)
6. [AWS Console](#)
7. [AWS RDS](#)
8. [AWS Migration](#)
9. [AWS Fargate](#)
10. [Amazon Lex](#)
11. [Amazon Lightsail](#)

12. [AWS Pricing](#)

13. [Amazon Athena](#)

14. [AWS Resume](#)

15. [Amazon VPC Tutorial](#)

15. [AWS vs Azure](#)

17. [On-premise vs Cloud computing](#)

18. [Amazon Dynamo DB Tutorial](#)

19. [How To Restore EC2 From Snapshot?](#)

20. [AWS CodeCommit](#)

21. [Top AWS Architect Interview Questions](#)

22. [How To Restore EC2 From Snapshot?](#)

23. [Create Websites using AWS](#)

24. [Amazon Route 53](#)

25. [Securing Web Applications With AWS WAF](#)

Originally published at www.edureka.co on February 9, 2019.

[AWS](#)[Aws Cli](#)[Amazon Web Services](#)[Cloud Computing](#)[Aws Certification](#)

Published in Edureka

5.3K Followers · Last published Jul 30, 2022

[Follow](#)

There are many e-learning platforms on the internet & then there's us. We are not the biggest, but we are the fastest growing. We have the highest course completion rate in the industry. We provide live, instructor-led online programs in trending tech with 24x7 lifetime support.



Written by Vishal Padghan

351 Followers · 1 Following

[Follow](#)

A keen writer and a Cloud Computing Enthusiast

No responses yet



What are your thoughts?

[Respond](#)

More from Vishal Padghan and Edureka

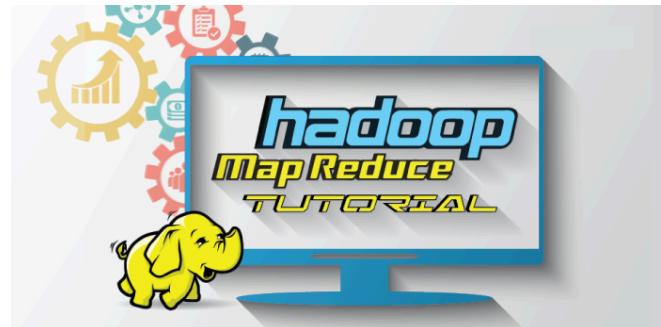


 In Edureka by Vishal Padghan

AWS Fargate—A Beginner's Guide To AWS Elastic Container Service

This blog on AWS Fargate will cover the need and working of AWS Fargate with a hands-on.

Nov 27, 2018  54



 In Edureka by Shubham Sinha

Fundamentals of MapReduce with MapReduce Example

In this MapReduce Tutorial you will learn all about MapReduce such as what is...

Nov 15, 2016  381  3



What is Dependency Injection?



In Edureka by Swatee Chand

Dependency Injection Using Spring Boot

This article on Dependency Injection is a comprehensive guide to the technique with ...

Jul 2, 2019 407 6



...

In Edureka by Vishal Padghan

AWS Elastic Beanstalk—Deploying An Application Using Beanstalk

This blog on AWS Elastic Beanstalk will tell you how to deploy applications without...

Oct 23, 2018 43 2



...

[See all from Vishal Padghan](#)

[See all from Edureka](#)

Recommended from Medium



 In AWS in Plain English by The Devops Girl



Harendra

Top AWS Interview Question: Troubleshooting S3 Bucket Access...

You are unable to access an S3 bucket that you know exists. What steps would you take...

Oct 6, 2024  103



...

How I Am Using a Lifetime 100% Free Server

Get a server with 24 GB RAM + 4 CPU + 200 GB Storage + Always Free

Oct 26, 2024  8.8K  134



...

Lists



Natural Language Processing

1916 stories · 1572 saves

Open in app ↗

Medium



Search



Write



 Jessica Stillman

Jeff Bezos Says the 1-Hour Rule Makes Him Smarter. New...

Jeff Bezos's morning routine has long included the one-hour rule. New...

Oct 30, 2024  22K  604



...

 NRT0401

Top 10 AWS Interview Questions (Part 4)

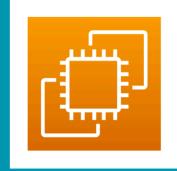
1. What is Amazon S3 Glacier, and when should it be used?

Oct 11, 2024  26



...

Introduction to Cloud and EC2



Shivam Bhadani

AWS Part 1—Introduction to Cloud and EC2

From this blog, we are going to start the Amazon Web Services (AWS) Series. If you a...

Aug 10, 2024

856

12



•••

Siddharth Singh

AWS Scenario Based Interview Questions

Sep 1, 2024

27



•••

[See more recommendations](#)