# Access S3 from a VPC

Erik Gonzalez

# Introducing Today's Project!

### How I used Amazon VPC in this project

In today's project, I used Amazon VPC to create an EC2 instance to communicate with my AWS resources using the CLI. I created access keys, secret access keys, and a file.

### One thing I didn't expect in this project was...

One thing I didn't expect in this project was how surprisingly fast I completed this project compared to others.

### This project took me...

This project took me about a little over an hour.

# In the first part of my project...

### Step 1 – Architecture set up

In this step, I will create a VPC from scratch and launch an EC2 instance into your VPC.

### Step 2 – Connect to my EC2 instance

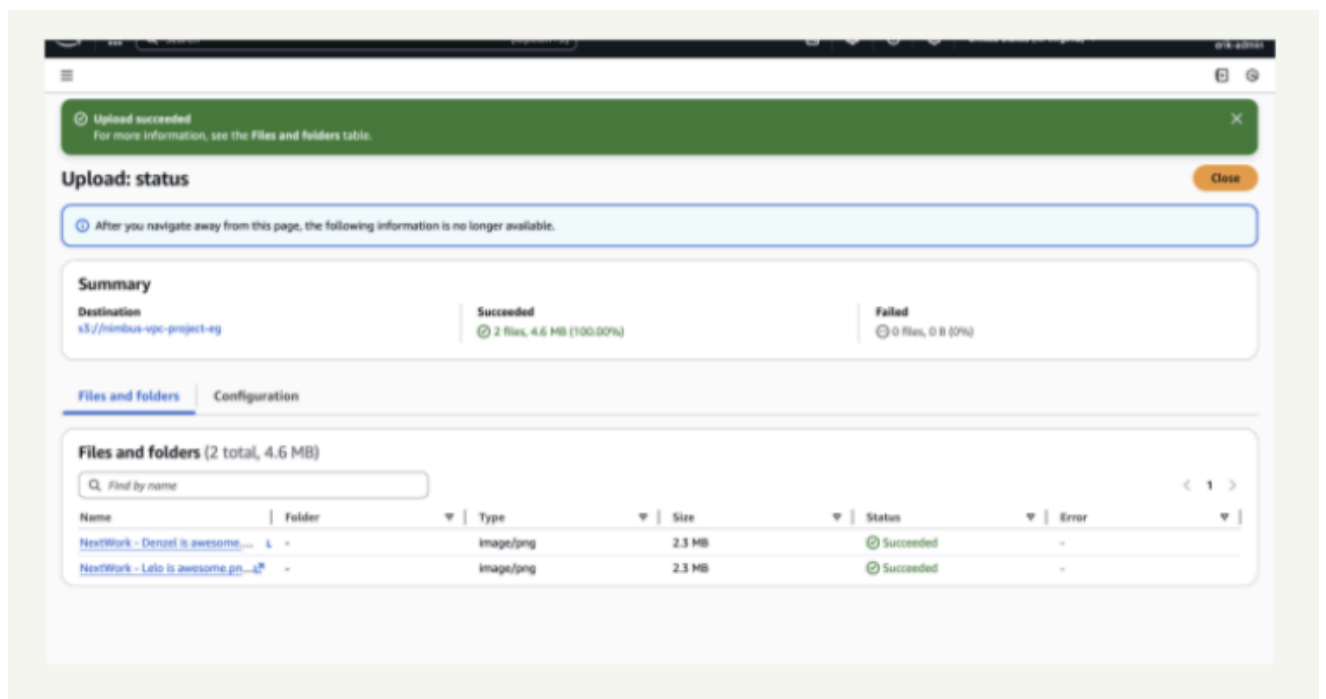In this step, I will connect directly to my EC2 instance.

### Step 3 – Set up access keys

In this step, I will give my EC2 instance access to your AWS environment.

# Architecture Set Up

I started my project by launching a VPC and an EC2 Instance.

I also set up an S3 bucket with two files inside.

# Running CLI Commands

AWS CLI is a unified, open-source tool that allows users to interact with Amazon Web Services (AWS) from their terminal or command prompt. It provides a consistent interface to manage and automate AWS services through commands and scripts. I have access to AWS CLI because...

The first command I ran was aws s3 ls. This command is used to list the S3 buckets in your account.

The second command I ran was 'aws configure.' This command is used to set up the AWS Command Line Interface (CLI) with your credentials and default settings.

# Access Keys

## Credentials

To set up my EC2 instance to interact with my AWS environment, I configured an access key ID, secret access key, default region and default output format.

Access keys are credentials for your applications and other servers to log into AWS and talk to your AWS services/resources.

The secret access key is like the password that pairs with your access key ID (your username). You need both to access AWS services.

## Best practice

Although I am using key access for this project, a best practice alternative is to to use IAM roles with permission attached. This is a more secure way to grant access to an EC2 instance because it is much easier to track, attach and detach IAM policies.

# In the second part of my project...

### Step 4 – Set up an S3 bucket

In this step, I will launch a bucket in Amazon S3. After creating this bucket, I'll learn how to access it from our EC2 instance and do things like checking what objects are in the bucket.
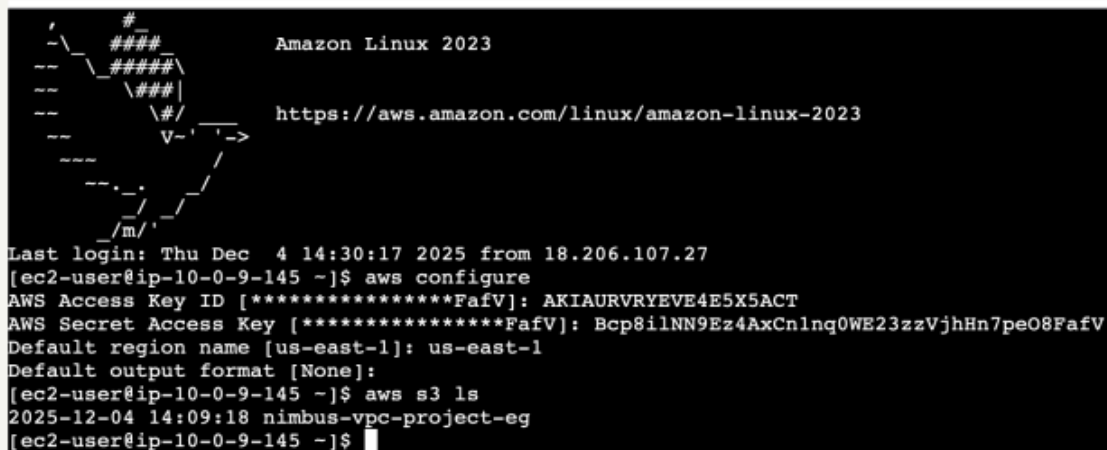
### Step 5 – Connecting to my S3 bucket

In this step, I will get my EC2 instance to interact with my S3 bucket.

# Connecting to my S3 bucket

The first command I ran was aws s3 ls. This command is used to list the S3 buckets in your account.

When I ran the command 'aws s3 ls' again, the terminal responded with a list of my S3 buckets. This indicates that my access key works! My EC2 Instance now has access to my AWS environment.

# Connecting to my S3 Bucket

Another CLI command I ran was 'aws s3 ls s3://nimbus-vpc-project-eg' which returned a list of the objects within the S3 Bucket!

```
[ec2-user@ip-10-0-9-145 ~]$ aws s3 ls s3://nimbus-vpc-project-eg
2025-12-04 14:20:16    2431554 NextWork - Denzel is awesome.png
2025-12-04 14:20:17    2399812 NextWork - Lelo is awesome.png
[ec2-user@ip-10-0-9-145 ~]$ 
```

# Uploading Objects to S3

To upload a new file to my bucket, I first ran the command as sudo touch /tmp/test.txt This command creates a blank file called test.txt in my EC2 Instance's local directory.

The second command I ran was aws s3 cp /tmp/test.txt s3://nimbus-vpc-project eg This command will copy i.e. upload the blank file created into my S3 bucket

The third command I ran was aws s3 ls s3://nimbus-vpc-project-eg which validated that the blank file was created in a list it provided: test.txt.

```
[ec2-user@ip-10-0-9-145 ~]$ aws s3 ls s3://nimbus-vpc-project-eg
2025-12-04 14:20:16     2431554 NextWork - Denzel is awesome.png
2025-12-04 14:20:17     2399812 NextWork - Lelo is awesome.png
2025-12-04 14:43:12           0 test.txt
[ec2-user@ip-10-0-9-145 ~]$
```