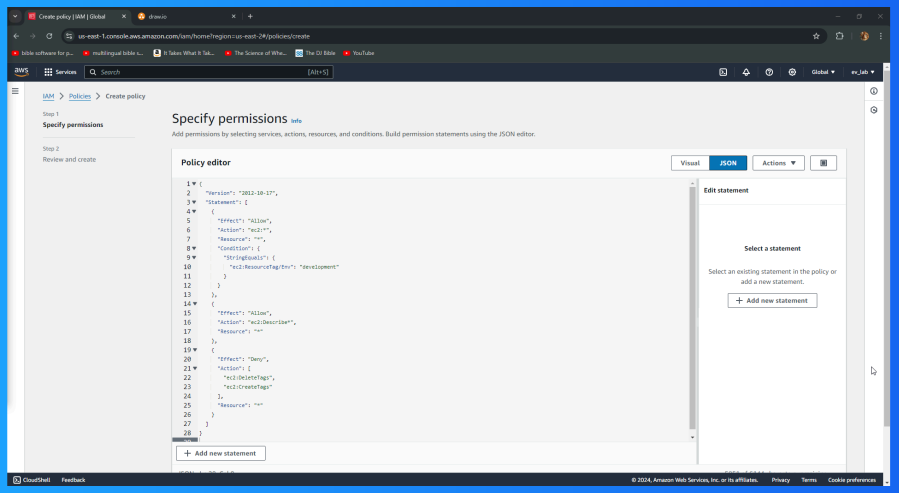
NextWork.org

Cloud Security with AWS IAM

Evelio Morales Jr.



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Introducing today's project!

What is AWS IAM?

AWS IAM is an application in AWS that is used to provide a specified level of access to resources and services to users with in an organization.

How I'm using AWS IAM in this project

I created a policy/permissions that allowed or denied a user in a specified group, to have certain privileges to manage the resources and services they have access to.

One thing I didn't expect...

To have the ability to test instances without logging in to them individually one by one.

This project took me...

This project took about 1 hour to 45 minutes.

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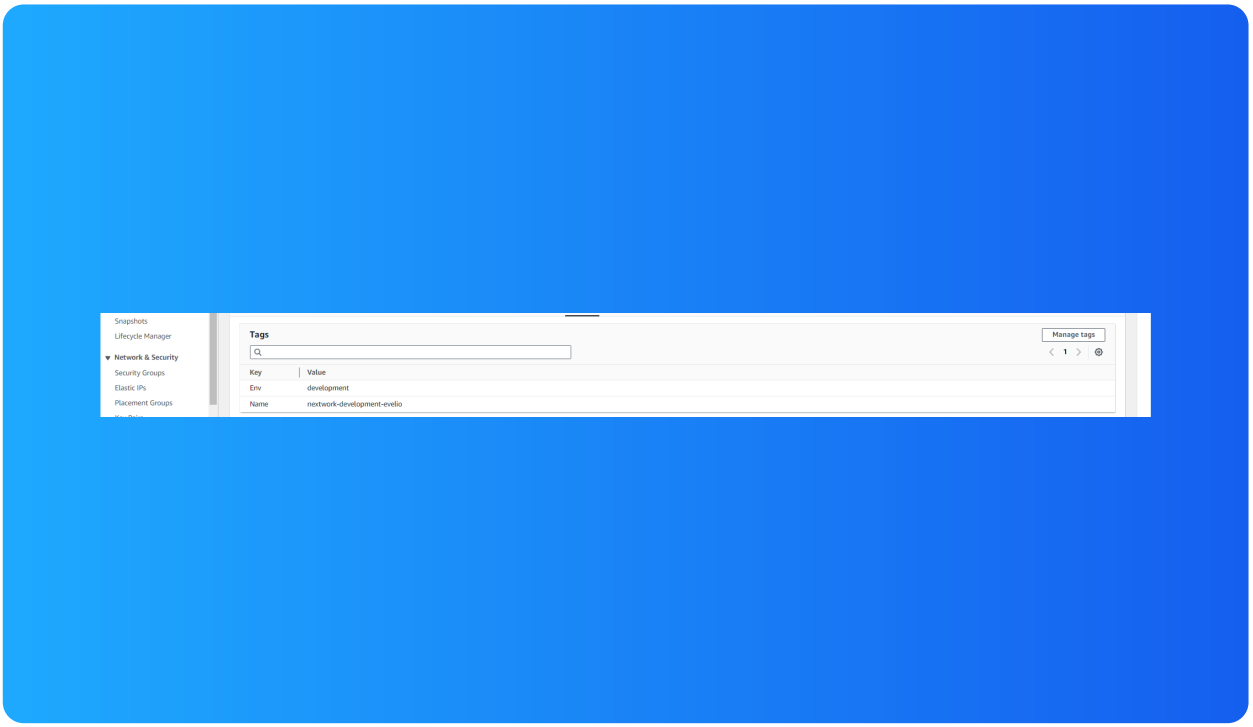
Tags

Tags are labels for resources, tags help us identify all resources.

The tag I've used on my EC2 instances is called Env. short for environment. The value I've assigned for my instances are production and development.



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IAM Policies

IAM Policies are permissions made to grant a certain level of access to users needing to use services and resources in AWS.

The policy I set up

For this project, I've set up a policy using JSON.

I've created a policy that allows the starting, stopping, and describing EC2 instances for instances tagged EVN = Development.

When creating a JSON policy, you have to define its Effect, Action and Resource.

The Effect, Action, and Resource attributes of a JSON policy means what the policy allows or denies (Effect), a list of the actions (Action), and what resources the action is applied to (Resource).

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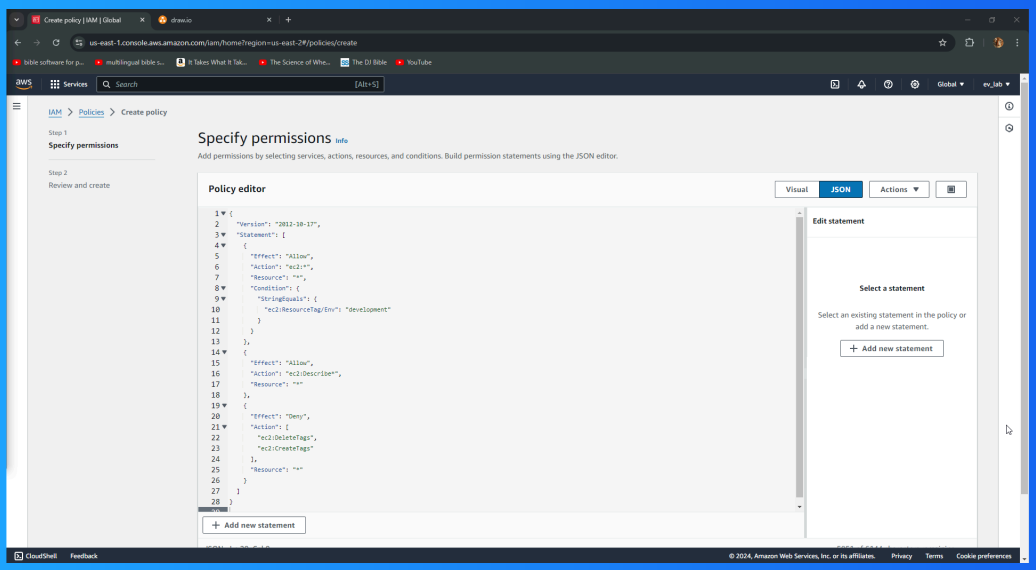
My JSON Policy



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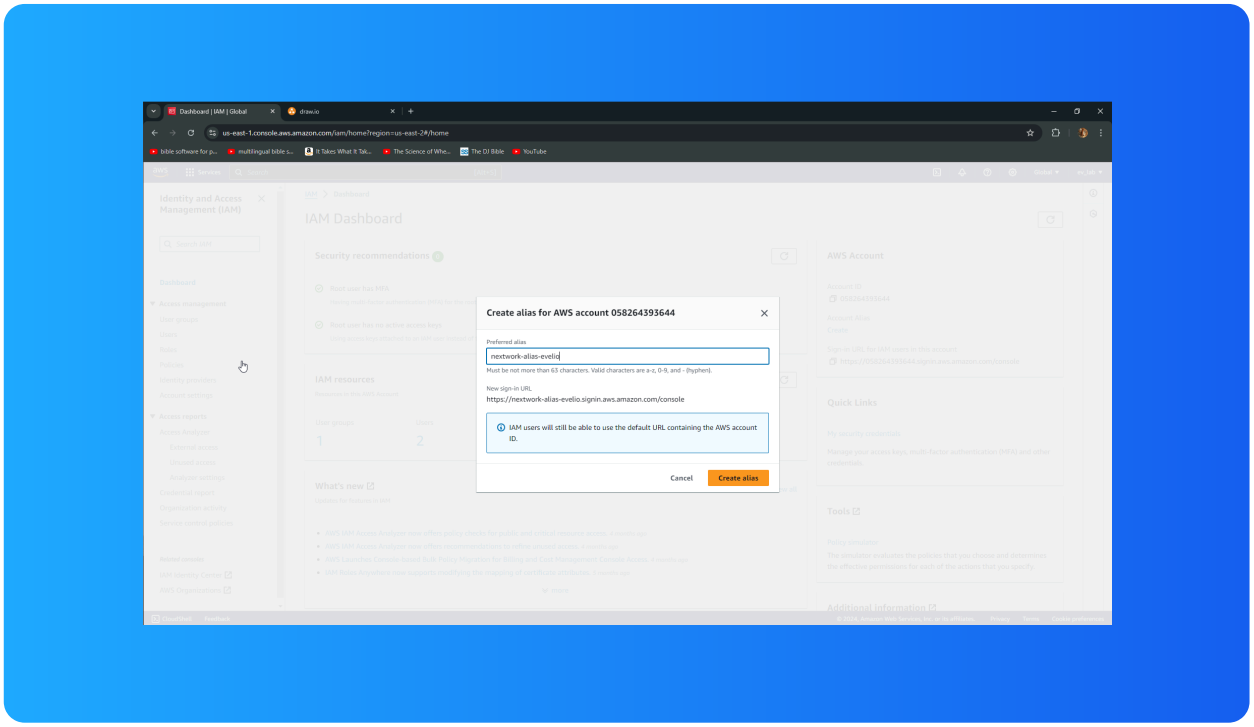
Account Alias

An account alias is a way to shorten the URL made to access the sign-in page to the console.

Creating an account alias took me 2 - 3 minutes.

Now my new AWS console sign-in URL is nextwork-alias-evelio.



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IAM Users and User Groups

Users

IAM users are the users created to access the resources and services of the console.

User Groups

IAM user groups are a collection of users (folder of many users).

I attached the policy I created to this user group, which means all users added to the group will automatically have the same policy attached to them. There is no need to do it individually.

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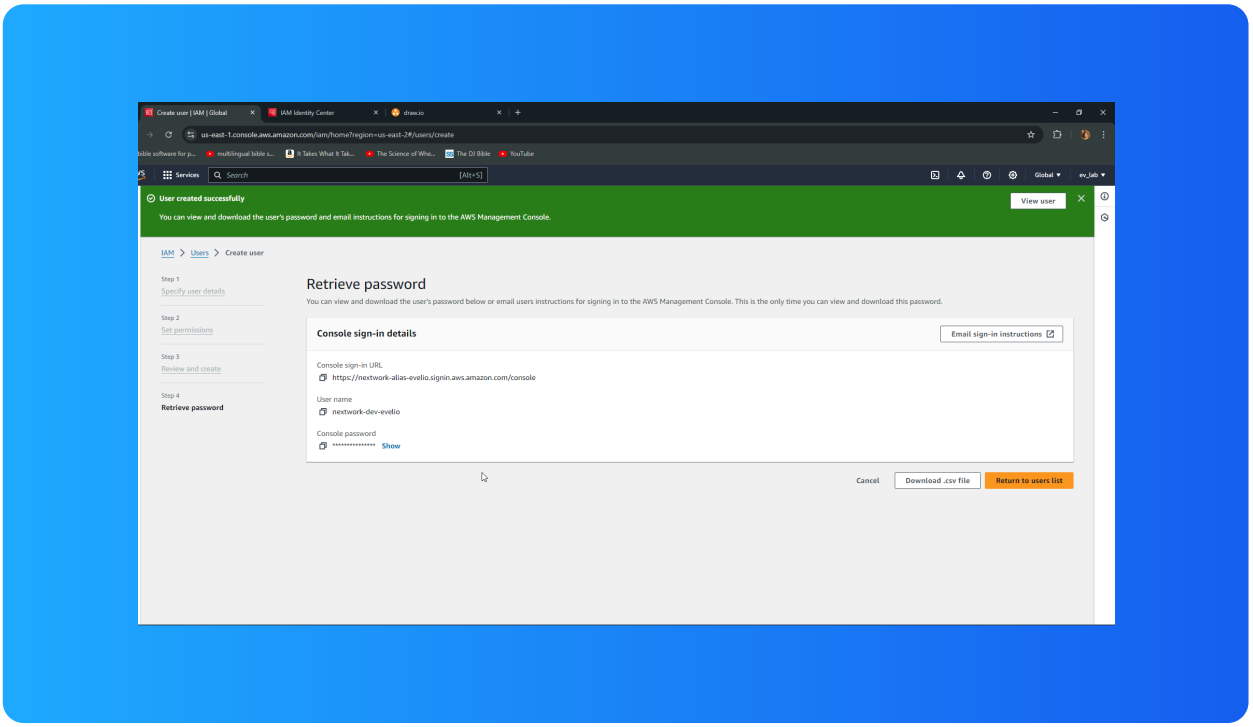
Logging in as an IAM User

The first way is emailing the sign-in instructions and second downloading a .CSV file.

Once I logged in as my IAM user, I noticed that I had Access denied to many services.



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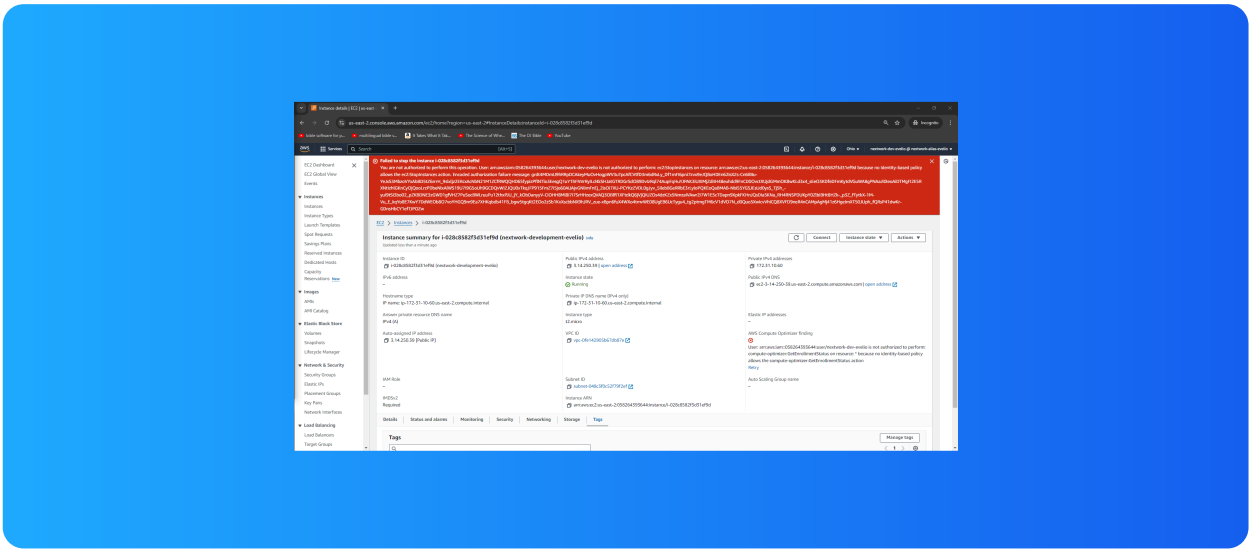
Testing IAM Policies

I tested my JSON IAM policy by stopping the production instance.

Stopping the production instance

When I tried to stop the production instance I received an error due to not having permission.



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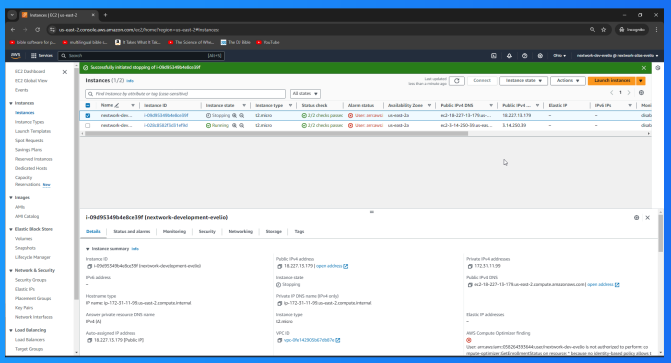
Testing IAM Policies

Stopping the development instance

Next, when I tried to stop the development instance I received a successfully stopped due to having permission.



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