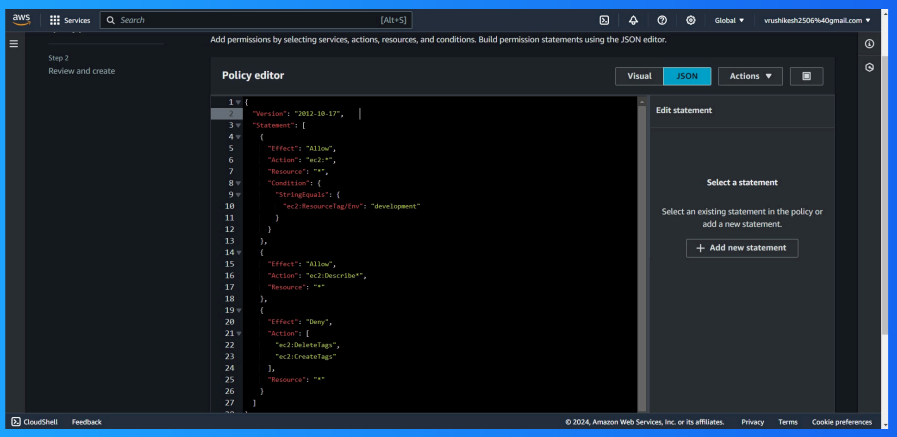
NextWork.org

Cloud Security with AWS IAM

Rushikesh



R
Rushikesh
NextWork Student

Introducing today's project!

What is AWS IAM?

IAM is useful for user authentication and authorization

How I'm using AWS IAM in this project

In todays project i have created users and added them into a group and assigned a policy to that group

One thing I didn't expect...

IAM simulation

This project took me...

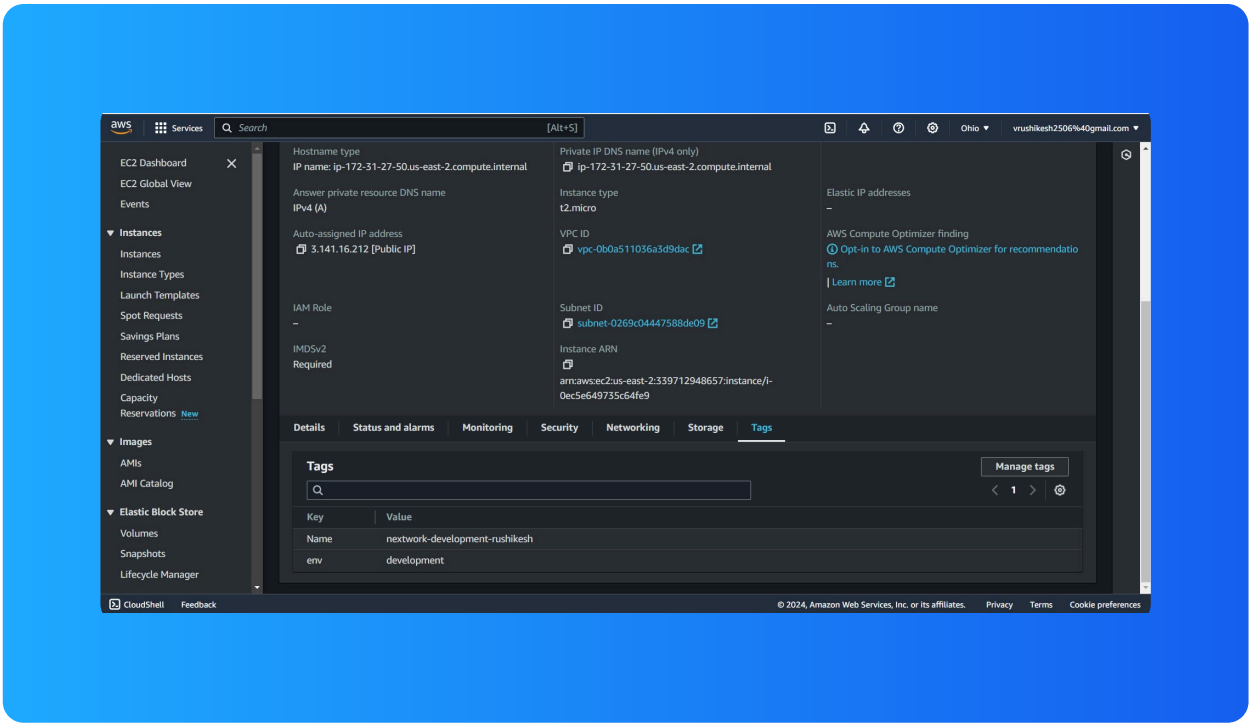
I took less than a hour to finish this project

Rushikesh
NextWork Student

Tags

Tags are like Labels that can be attached to our resources, These are used to easily identify our resources. For example if we have tens of servers in dev/uat/prod env's, once we tag our servers we can identify them easily to which env it belongs to

The tag I've used on my EC2 instances is called env The values I've assigned for my instances are Development and Production



R
Rushikesh
NextWork Student

IAM Policies

IAM Policies are like a set of rules/permissions that can be applied to users. The users will be within in the IAM rule(policy) boundary

The policy I set up

For this project i have used JSON to setup my policy

In this policy there is an action of ec2 allowed for all the instances with the tag as development.

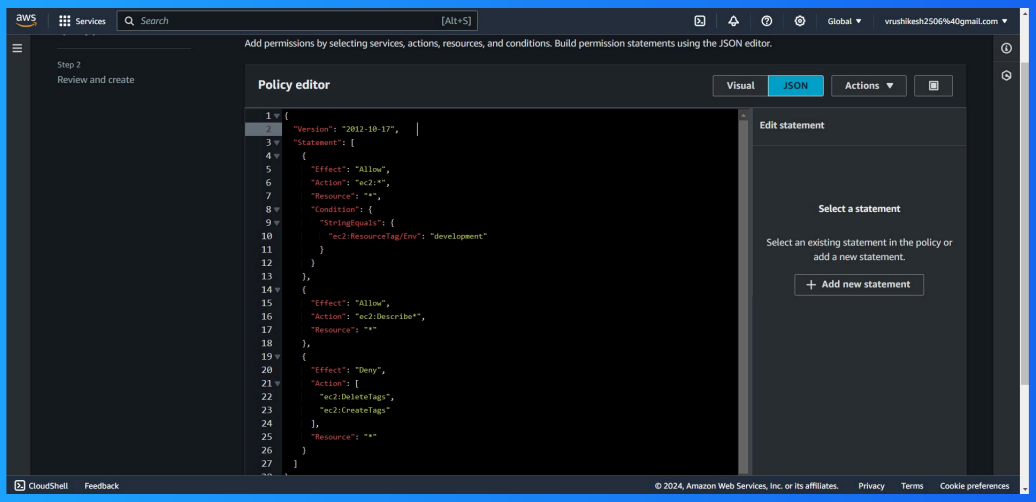
When creating a JSON policy, you have to define its Effect, Action and Resource.

Effect can have two values - either Allow or Deny to indicate whether the policy allows or denies a certain action. Deny has priority. Action is A list of the actions that the policy allows or deny Resource are for what does this policy apply to

R

Rushikesh
NextWork Student

My JSON Policy



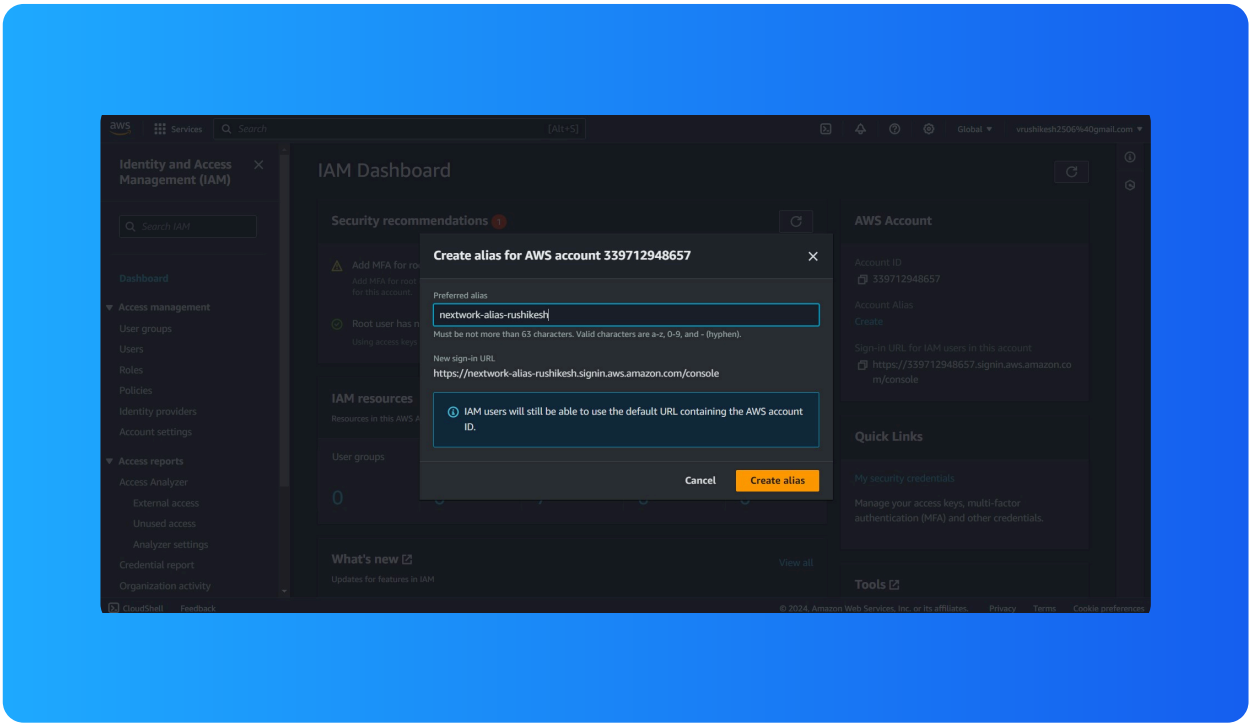
R
Rushikesh
NextWork Student

Account Alias

Aliasing is giving a new name instead of using the original name

Creating an Account Alias took me less than a minute

https://nextwork-alias-rushikesh.signin.aws.amazon.com/console is my signin URL after account Alias



R
Rushikesh
NextWork Student

IAM Users and User Groups

Users

IAM users are the people that will get access to your resources/AWS account, whereas user groups are the collections/folders of users for easier user management.

User Groups

An IAM user group is a collection/folder of IAM users. It allows you to manage permissions for all the users in your group at the same time by attaching policies to the group rather than individual users.

If my user group has 10 users, if i want a policy that has be attached to the users, instead of attaching individually i can do all the 10 users at once by attaching a policy to the group

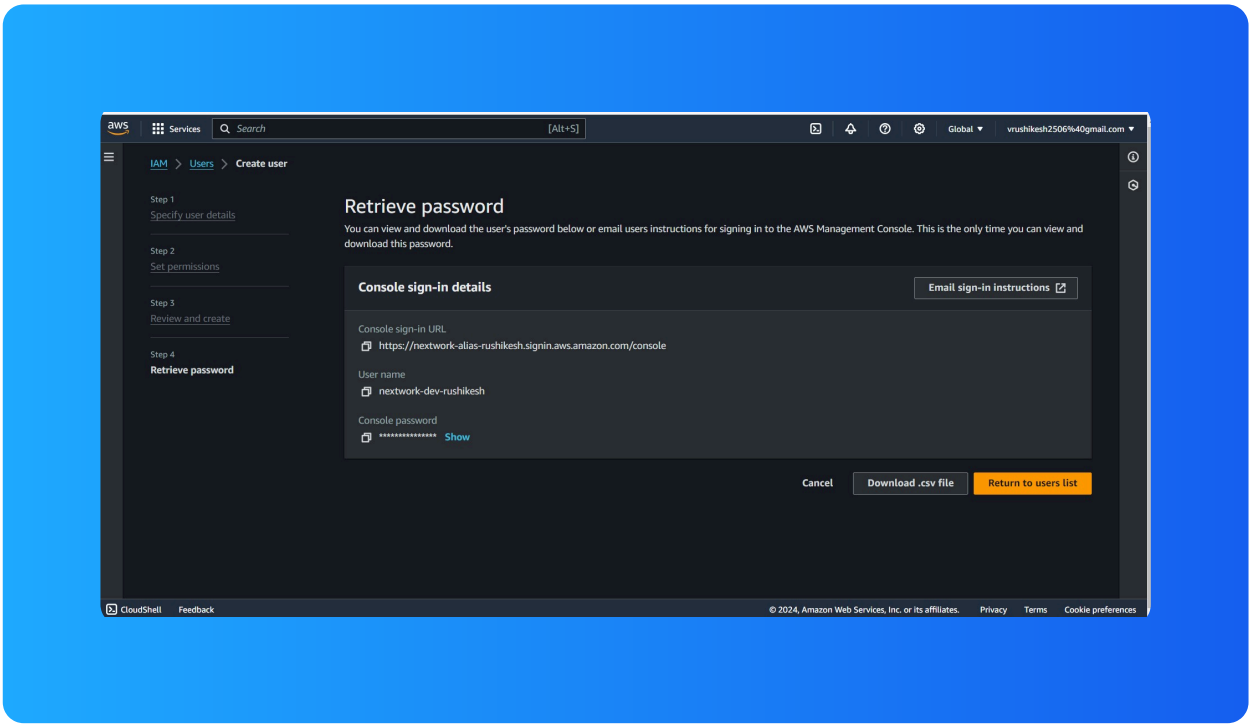
R

Rushikesh
NextWork Student

Logging in as an IAM User

USERNAME PASSWORD

Once I logged in as my IAM user, I noticed it was totally a new one and some access were denied



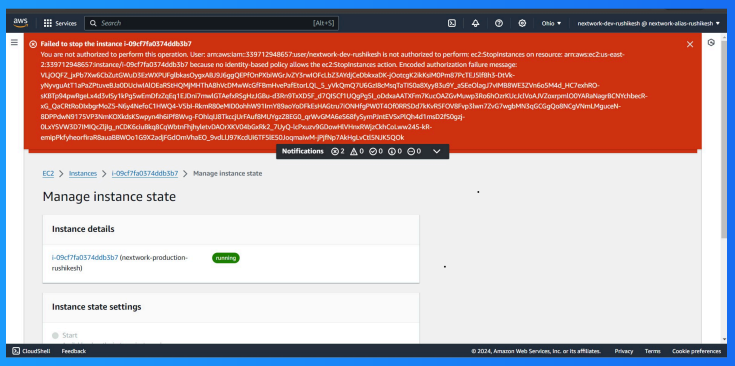
Rushikesh
NextWork Student

Testing IAM Policies

I tested my JSON IAM policy by stopping the EC2 instance for DEV and Prod instances

Stopping the production instance

when i tried to stop my production instance it gave me an error saying that i do have access to stop production instance

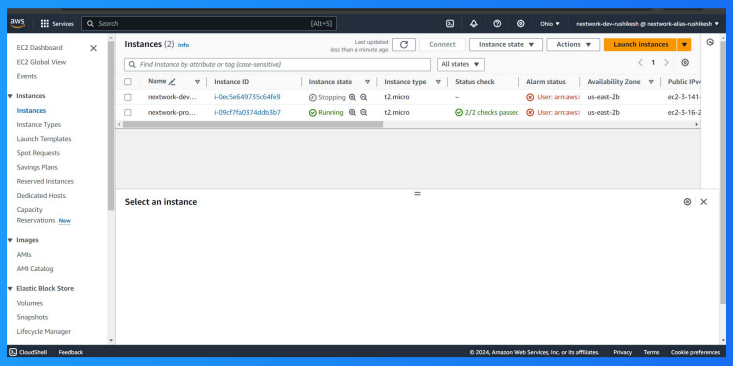


R
Rushikesh
NextWork Student

Testing IAM Policies

Stopping the development instance

when I tried to stop the development instance it stopped successfully since i have the permissions written in the JSON data while creating the IAM user group policy



Everyone should be in a job they love.

Check out nextwork.org for more projects