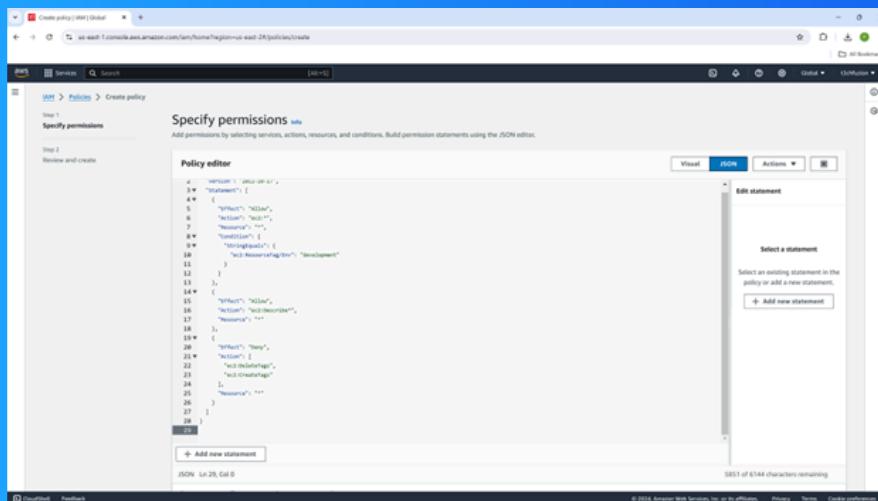




Cloud Security with AWS IAM



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Introducing today's project!

What is AWS IAM?

AWS Identity and Access Management (IAM) is a web service that lets you securely control access to AWS services.

How I'm using AWS IAM in this project

I was able to control who had what permissions

One thing I didn't expect...

The amount of steps I had to complete

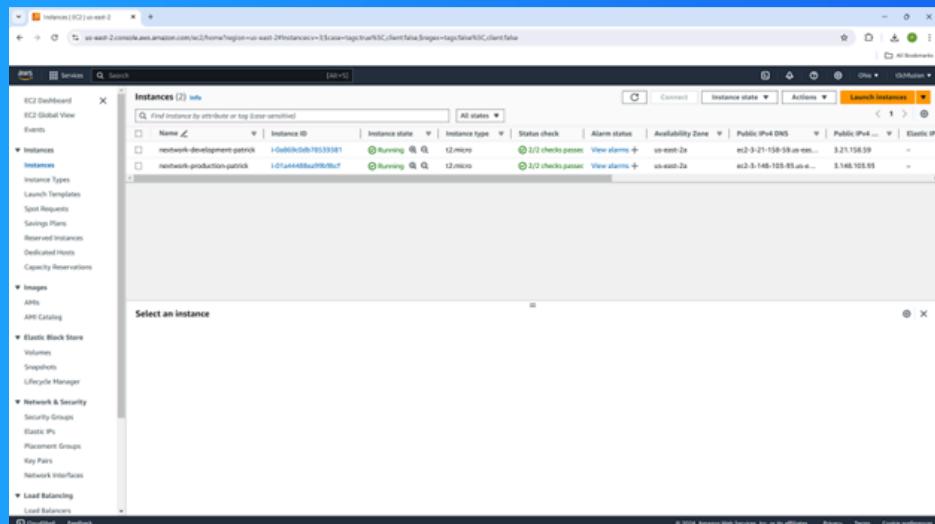
This project took me...

Took me about 30 minutes to complete

Tags

Tags are Development and Production with a name of Env(Enviroment)

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



IAM Policies

IAM stands for Identity and Access Management. You'll use AWS IAM to manage the access level that other users and services have to your resources. a rule for who can do what with your AWS resources. It's all about giving permissions.

The policy I set up

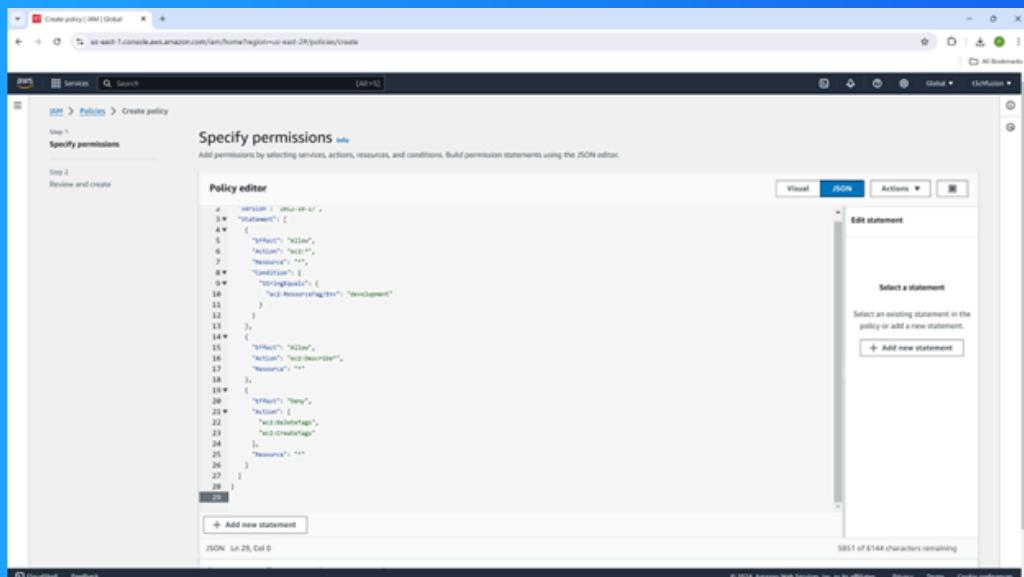
For this project, I've set up a policy using the JSON editor

I've created a policy that either Allow or Deny - to indicate whether the policy allows or denies a certain action. Deny has priority. Looking at the first statement, "Effect": "Allow" means this statement is trying to allow for an action.

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

Effect-This can have two values-either Allow or Deny-to indicate whether the policy allows or denies a certain action. Action A list of the actions that the policy allows or denies.Resource Which resources does this policy apply to?

My JSON Policy



```
4 "Version": "2012-10-17",
5 "Statement": [
6     {
7         "Effect": "Allow",
8         "Action": "sns:ListTags",
9         "Resource": "*",
10        "Condition": {
11            "StringEquals": {
12                "sns:Environment": "Development"
13            }
14        }
15    },
16    {
17        "Effect": "Allow",
18        "Action": "sns:CreateTags",
19        "Resource": "*"
20    },
21    {
22        "Effect": "Allow",
23        "Action": [
24            "sns:DeleteTags",
25            "sns:CreateTags"
26        ],
27        "Resource": "*"
28    }
29 ]
30 }
```

+ Add new statement

JSON | Line 29, Col 0

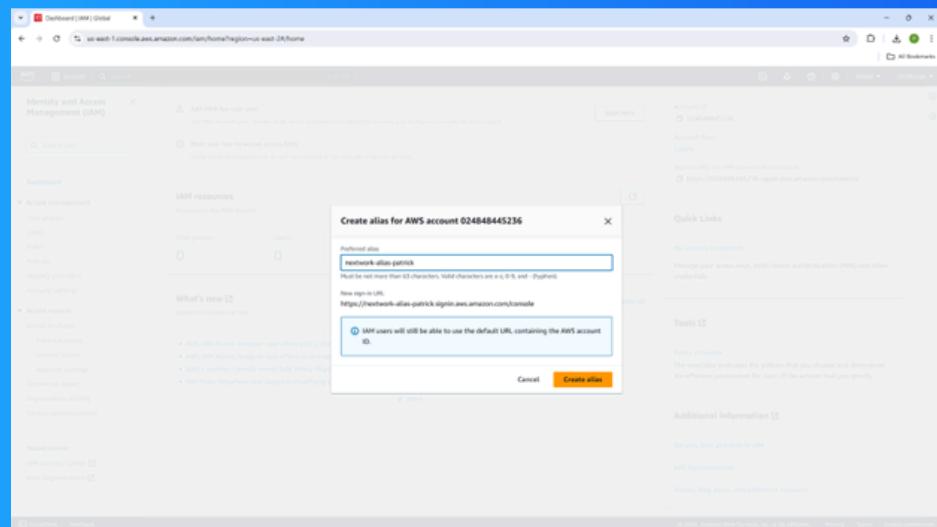
5851 of 6144 characters remaining

Account Alias

An Account Alias is a friendly name for your AWS account that you can use instead of your account ID (which is usually a bunch of digits) to sign in to the AWS Management Console.

Creating an account alias took me less than a minute.

Now, my new AWS console sign-in URL is <https://nextwork-alias-patrick.signin.aws.amazon.com/console>



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

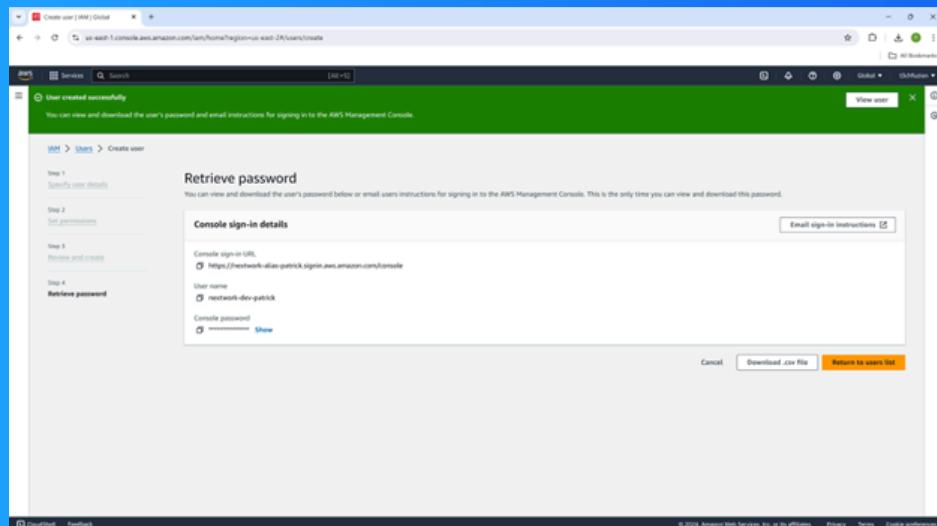
An IAM user group is a collection/folder of IAM users. It allows you to manage permissions for all the users in your group at the same time by attaching policies to the group rather than individual users.

I attached the policy I created to this user group, which means to grant them the permissions associated with that group. This simplifies managing permissions and ensures consistency across users who have similar access to AWS resources.

Logging in as an IAM User

The first way is to give the URL associated with the new user.

Once I logged in as my IAM user, I noticed I was unable to access some features





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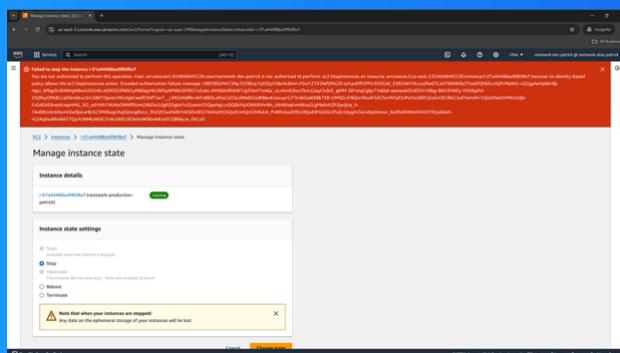
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Testing IAM Policies

I tested my JSON IAM policy by stopping an instance I did not have access to, which was denied. The development instance I was able to stop.

Stopping the production instance

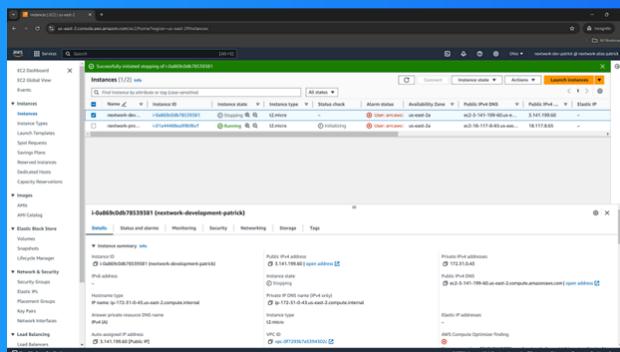
When I tried to stop the production instance I was denied as I did not have ther permission.



Testing IAM Policies

Stopping the development instance

Next, when I tried to stop the development instance I was able to stop as I had permission





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