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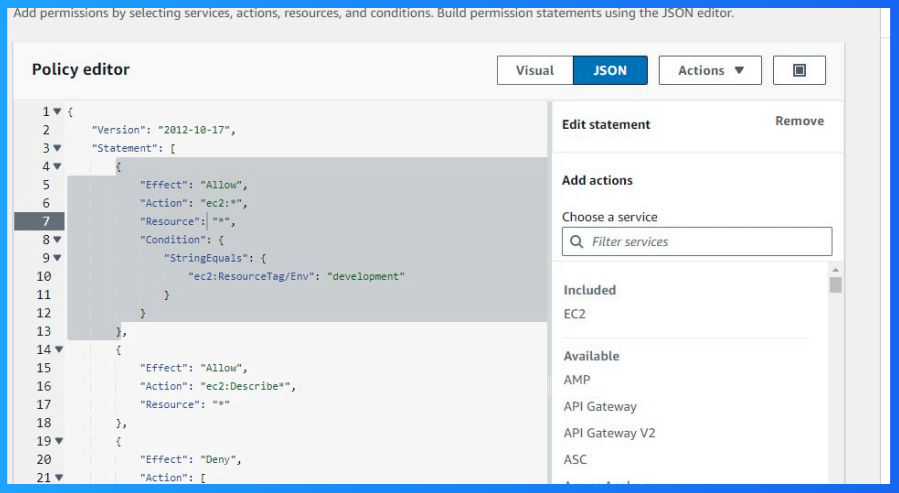
Cloud Security with AWS IAM

Ronson Lobo



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Introducing today's project!

What is AWS IAM?

AWS Identity and Access Management (IAM) is a free web service that allows you to control access to AWS resources and services. It's a key tool for securing your AWS account by helping you: Manage permissions Create and manage roles etc

How I'm using AWS IAM in this project

I used AWS IAM by creating a new user and granting the permission to that user to perform specific action via JSON policy

One thing I didn't expect...

I wasn't expecting the policy will run

This project took me...

I was able to complete this project in 1 hour of time

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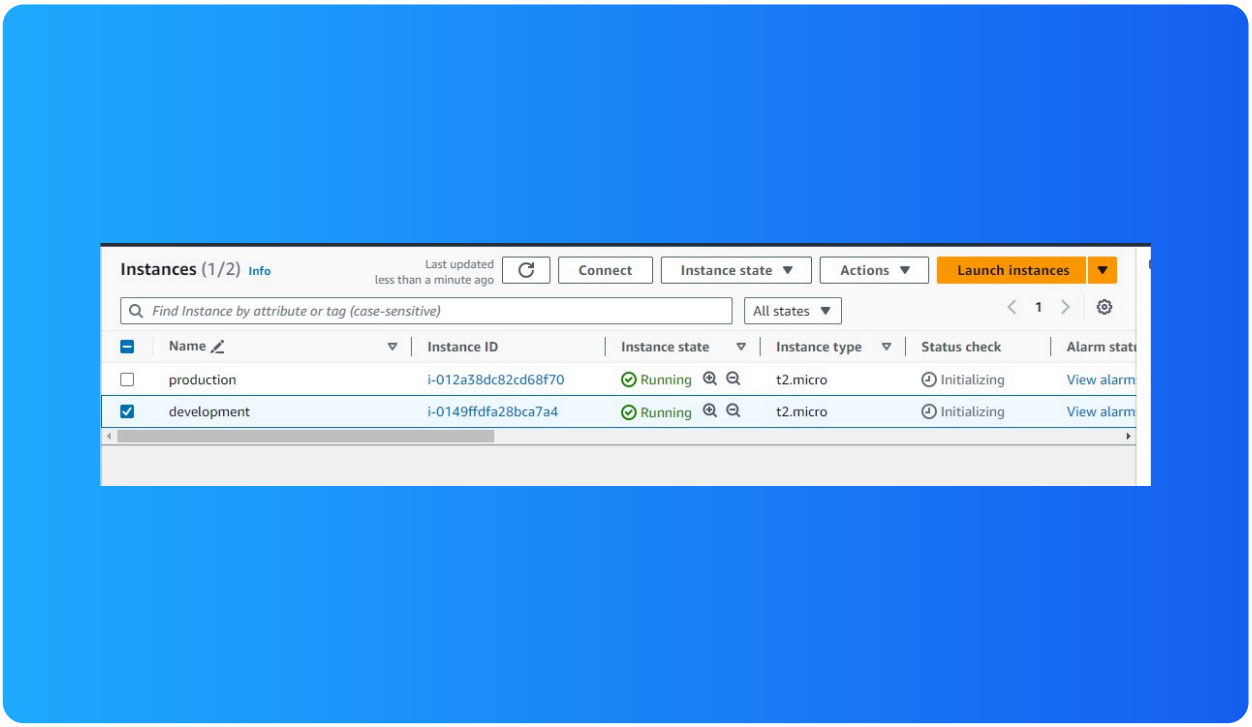
Tags

In AWS, tags are labels or attributes that you can attach to resources to help you manage, identify, and organize them:

The tag I've used on my EC2 instances is called production and development



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IAM Policies

IAM policies define permissions for users, groups, and roles in an AWS account, and regulate access to AWS resources. They are a key part of any solution built on AWS-managed services.

The policy I set up

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

'I've created a policy that Allow or Deny on mentioned keywords

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

In AWS, a policy is a JSON document that defines permissions and resource access rules. Action is a rule to be performed on a resource and a resource in JSON policy is the target

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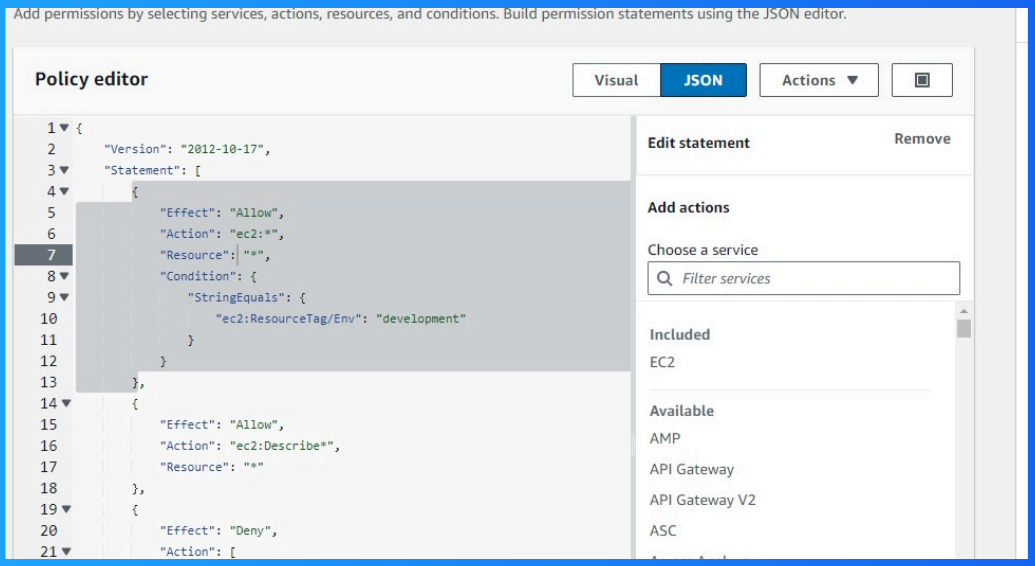
My JSON Policy



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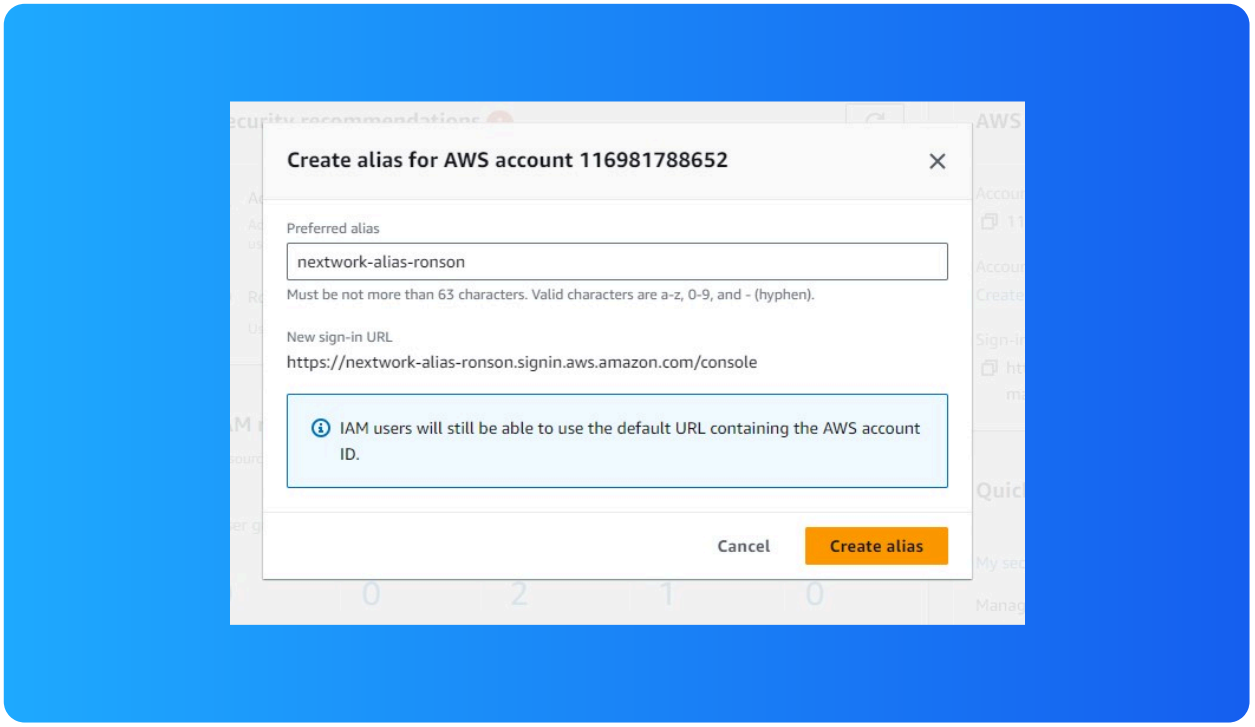
Account Alias

An account alias is an alternate name for an account number, and is used to more easily identify an account when performing a transaction.

Creating an account alias took me a minute

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



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IAM Users and User Groups

Users

An IAM user is an entity in an AWS account that represents a person or application that interacts with AWS resources. IAM stands for AWS Identity and Access Management, which is a security measure that controls access to AWS resources.

User Groups

In Amazon Web Services (AWS), an IAM user group is a collection of IAM users that can be managed as a single entity. IAM user groups allow you to: Specify permissions for multiple users Make it easier to manage permissions Define what actions

I attached the policy I created to this user group, which means set of rules are define in JSON

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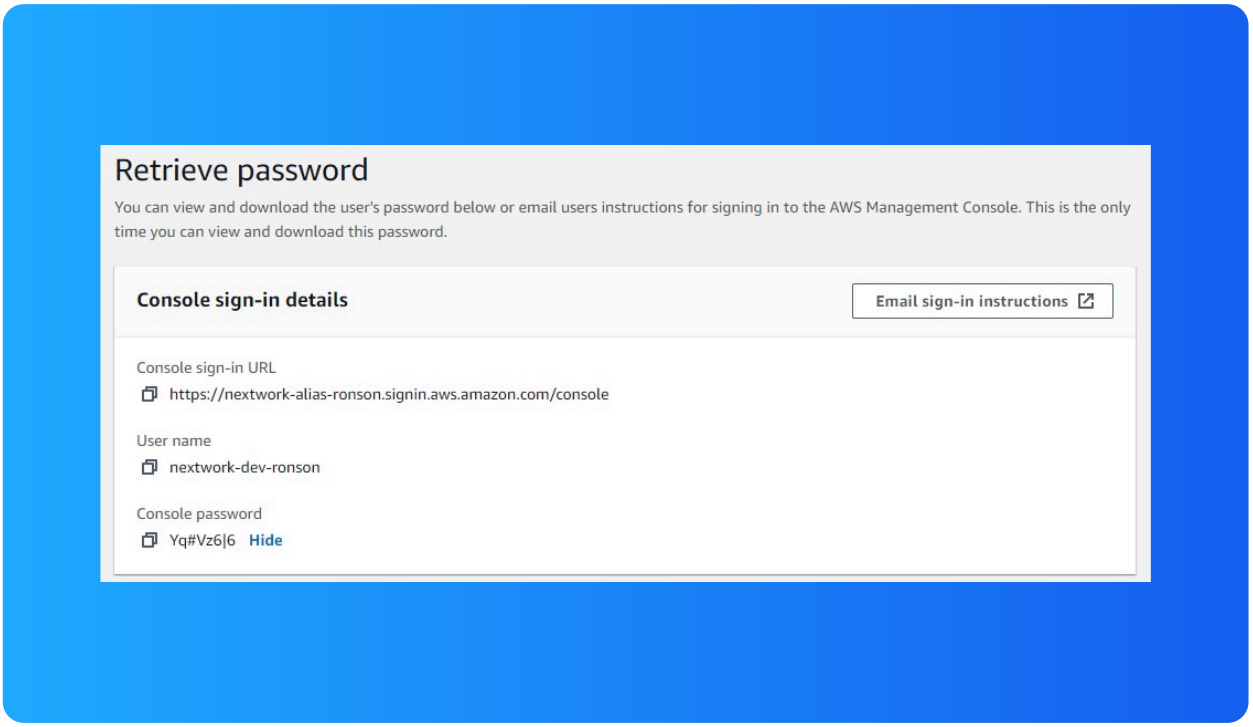
Logging in as an IAM User

The first way is is to share the user url name and user id password and ask him to change the password later and second option is create a user and provided the username and url and click on option Users must create a new password at next sign-in -

Once I logged in as my IAM user, I noticed Access Denied for



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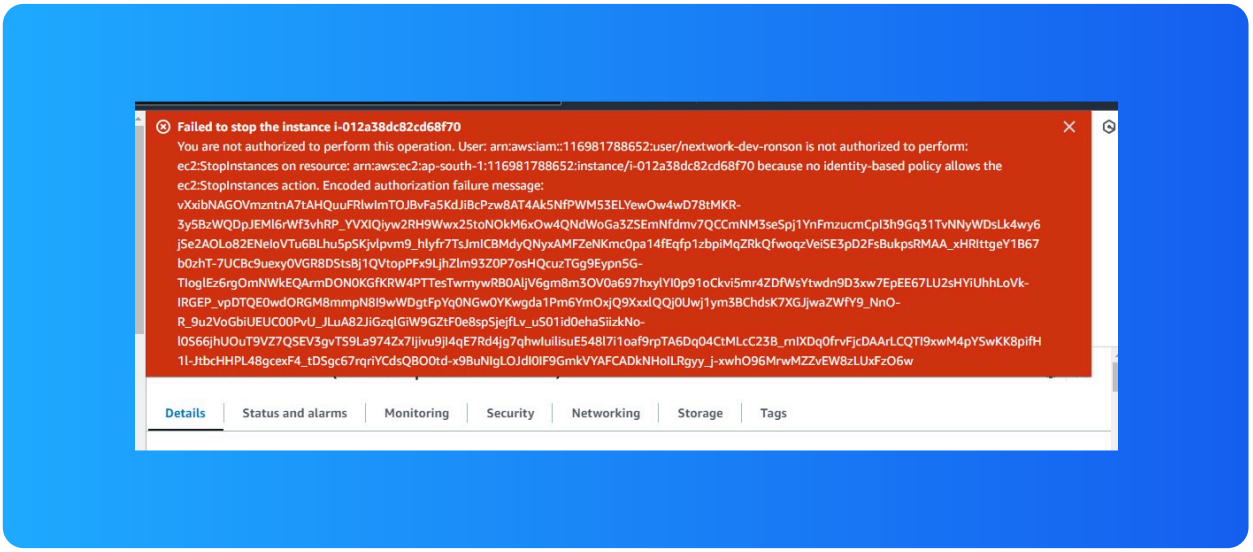
Testing IAM Policies

I tested my JSON IAM policy by stopping the development EC2 instance as it was pre-described. I was able to stop development instance but i was not able to stop the production instance

Stopping the production instance

When I tried to stop the production instance i got a big error on the screen. We don't have permission to stop any instance with the production tag.



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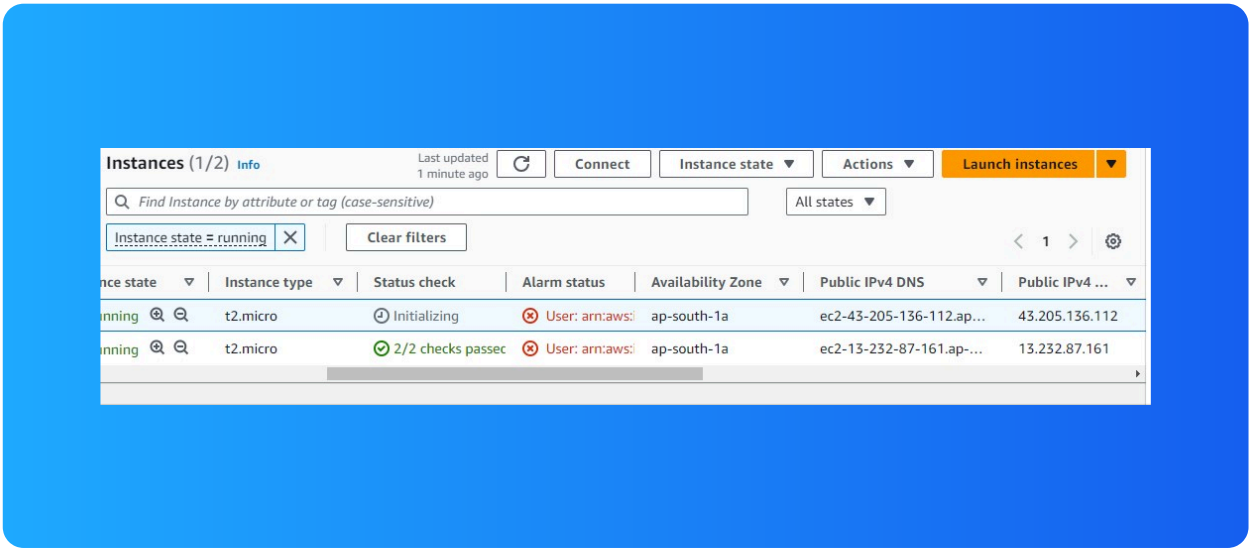
Testing IAM Policies

Stopping the development instance

Next, when I tried to stop the development instance i was able to stop the instance immediately without any error



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