ADVANCE DEVOPS EXPERIMENT NO.1

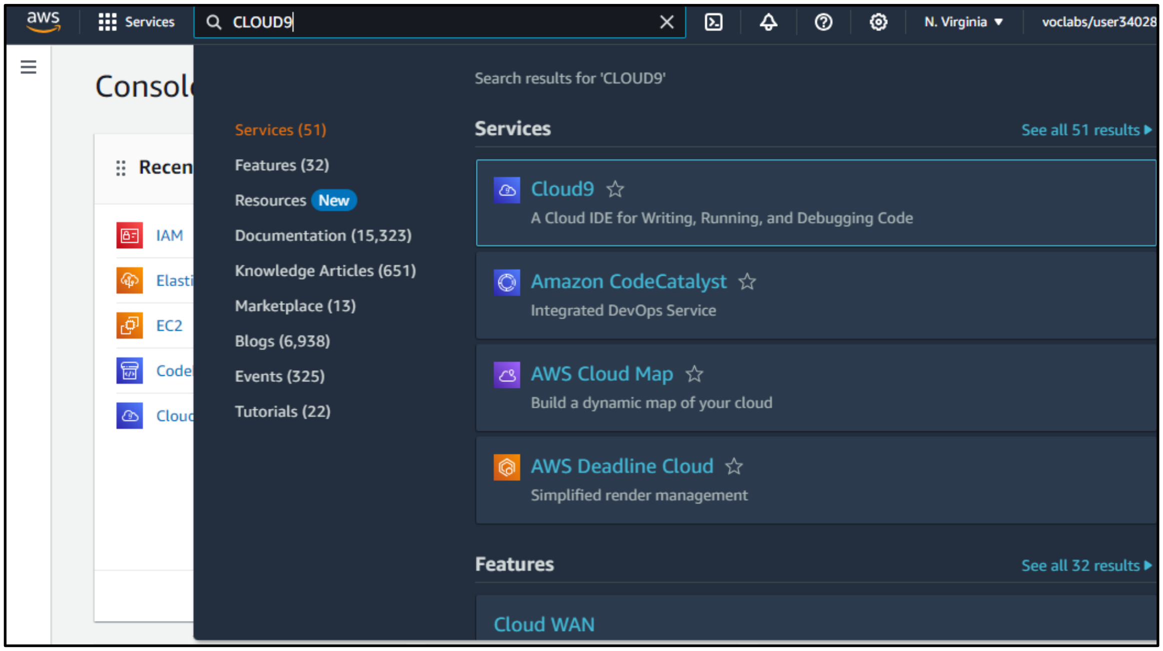
Niraj S. Kothawade
D15A - 24

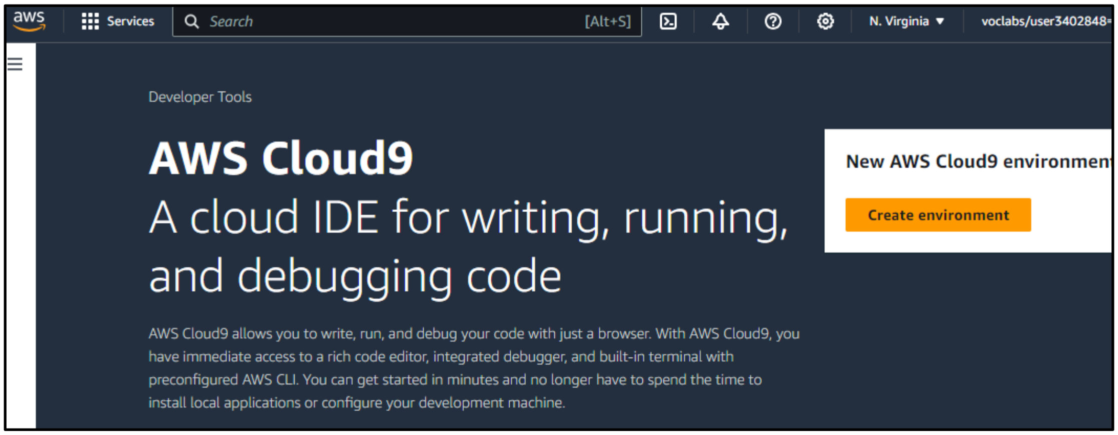
Aim:To understand the benefits of Cloud Infrastructure and Setup AWS Cloud9 IDE, Launch AWS Cloud9 IDE and Perform Collaboration Demonstration.

Cloud9

<u>Steps:</u>

1.Open your AWS account and search for Cloud9 service inside Developer tools. Create a new Cloud9 environment by filling in the required details. Make sure you use an EC2 instance to create your environment.





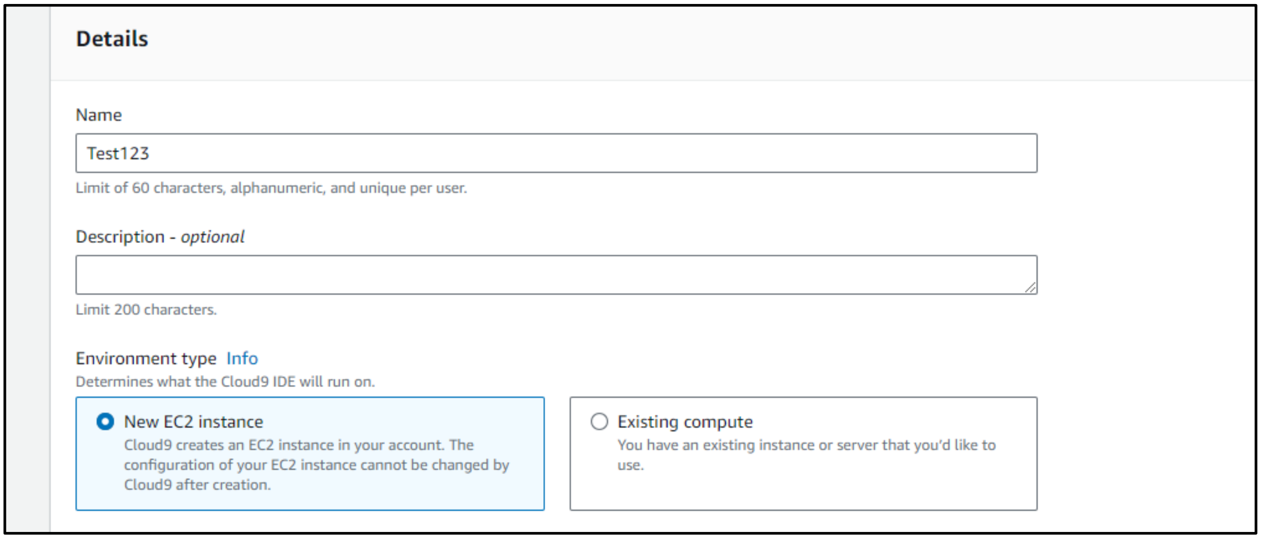
Developer Tools

AWS Cloud9

A cloud IDE for writing, running, and debugging code

AWS Cloud9 allows you to write, run, and debug your code with just a browser. With AWS Cloud9, you have immediate access to a rich code editor, integrated debugger, and built-in terminal with preconfigured AWS CLI. You can get started in minutes and no longer have to spend the time to install local applications or configure your development machine.

New AWS Cloud9 environmen



Details

Name

Test123

Limit of 60 characters, alphanumeric, and unique per user.

Description - *optional*

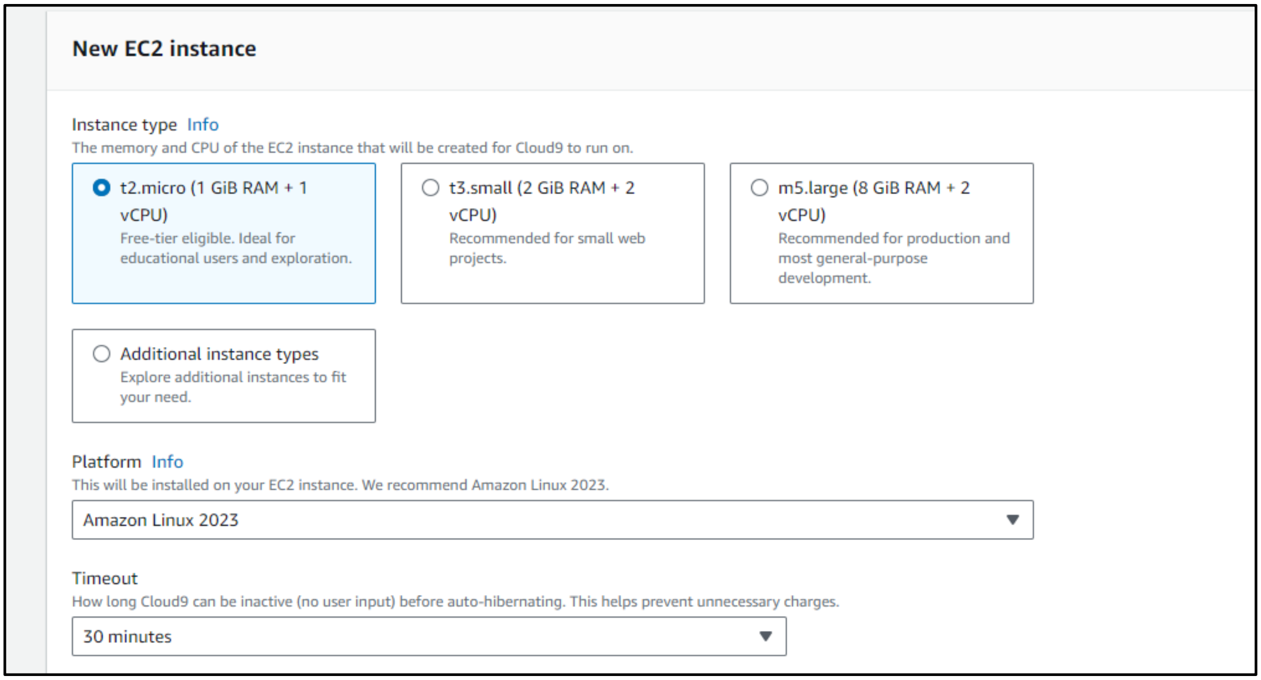
Limit 200 characters.

Environment type Info

Determines what the Cloud9 IDE will run on.

● New EC2 instance
Cloud9 creates an EC2 instance in your account. The configuration of your EC2 instance cannot be changed by Cloud9 after creation.

○ Existing compute
You have an existing instance or server that you'd like to use.



New EC2 instance

Instance type Info

The memory and CPU of the EC2 instance that will be created for Cloud9 to run on.

● t2.micro (1 GiB RAM + 1 vCPU)
Free-tier eligible. Ideal for educational users and exploration.

○ t3.small (2 GiB RAM + 2 vCPU)
Recommended for small web projects.

○ m5.large (8 GiB RAM + 2 vCPU)
Recommended for production and most general-purpose development.

○ Additional instance types
Explore additional instances to fit your need.

Platform Info

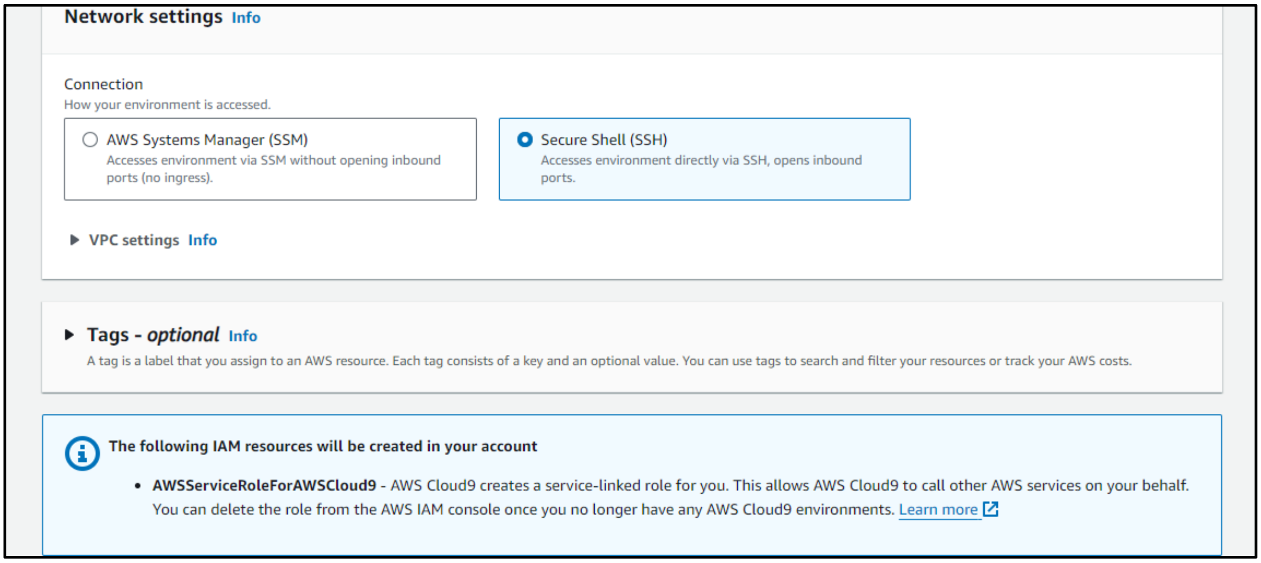
This will be installed on your EC2 instance. We recommend Amazon Linux 2023.

Amazon Linux 2023 ▼

Timeout

How long Cloud9 can be inactive (no user input) before auto-hibernating. This helps prevent unnecessary charges.

30 minutes ▼



Network settings Info

Connection

How your environment is accessed.

○ AWS Systems Manager (SSM)
Accesses environment via SSM without opening inbound ports (no ingress).

● Secure Shell (SSH)
Accesses environment directly via SSH, opens inbound ports.

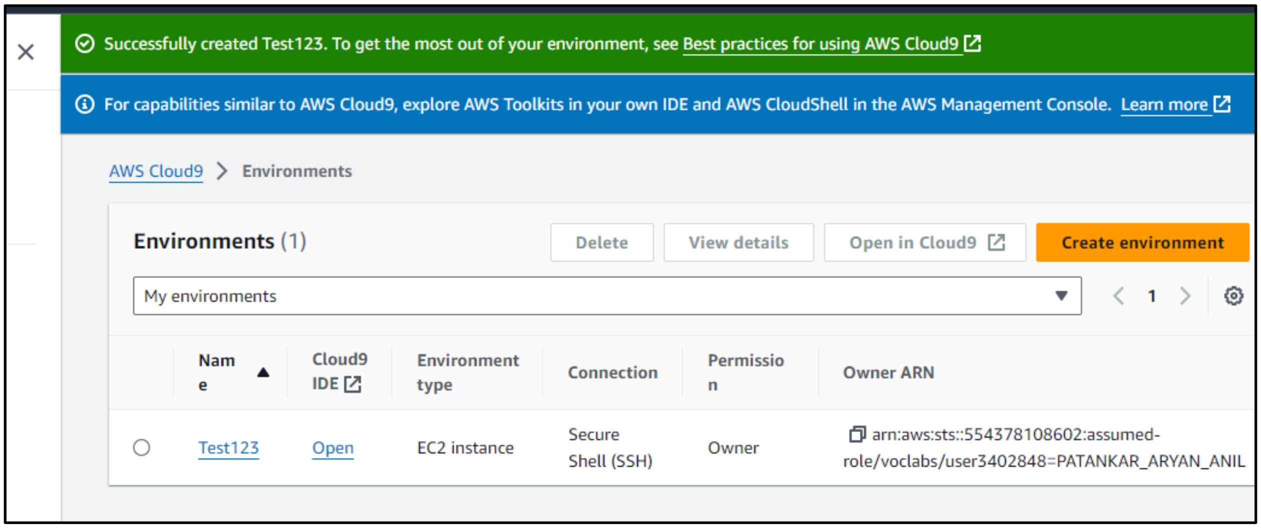
▶ VPC settings Info

▶ **Tags - *optional*** Info

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

The following IAM resources will be created in your account

- **AWSServiceRoleForAWSCloud9** - AWS Cloud9 creates a service-linked role for you. This allows AWS Cloud9 to call other AWS services on your behalf. You can delete the role from the AWS IAM console once you no longer have any AWS Cloud9 environments. Learn more



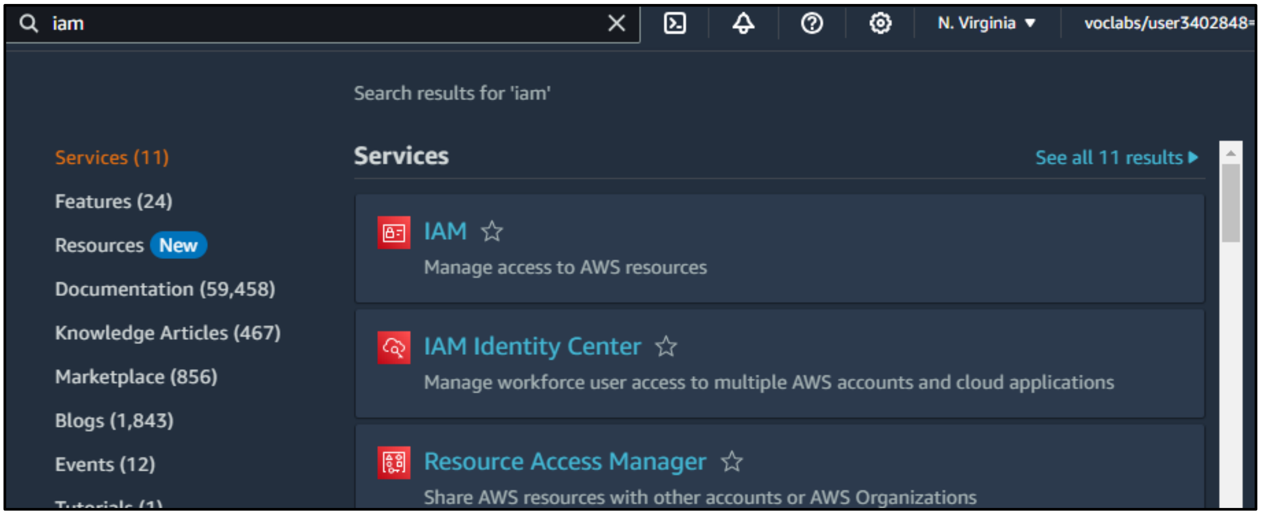
Successfully created Test123. To get the most out of your environment, see Best practices for using AWS Cloud9

For capabilities similar to AWS Cloud9, explore AWS Toolkits in your own IDE and AWS CloudShell in the AWS Management Console. Learn more

AWS Cloud9 > Environments

Environments (1)

	Name	Cloud9 IDE	Environment type	Connection	Permission	Owner ARN
○	Test123	Open	EC2 instance	Secure Shell (SSH)	Owner	arn:aws:sts::554378108602:assumed-role/voclabs/user3402848=PATANKAR_ARYAN_ANIL



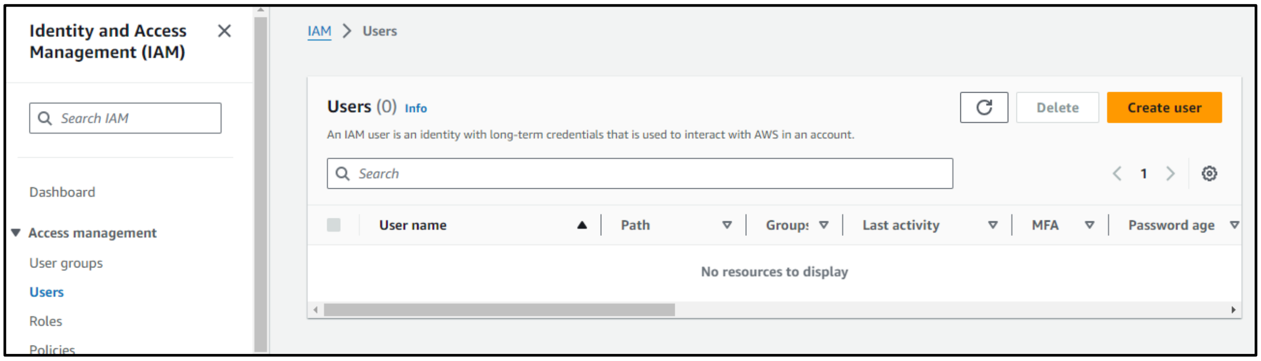
Search results for 'iam'

Services

IAM ☆
Manage access to AWS resources

IAM Identity Center ☆
Manage workforce user access to multiple AWS accounts and cloud applications

Resource Access Manager ☆
Share AWS resources with other accounts or AWS Organizations



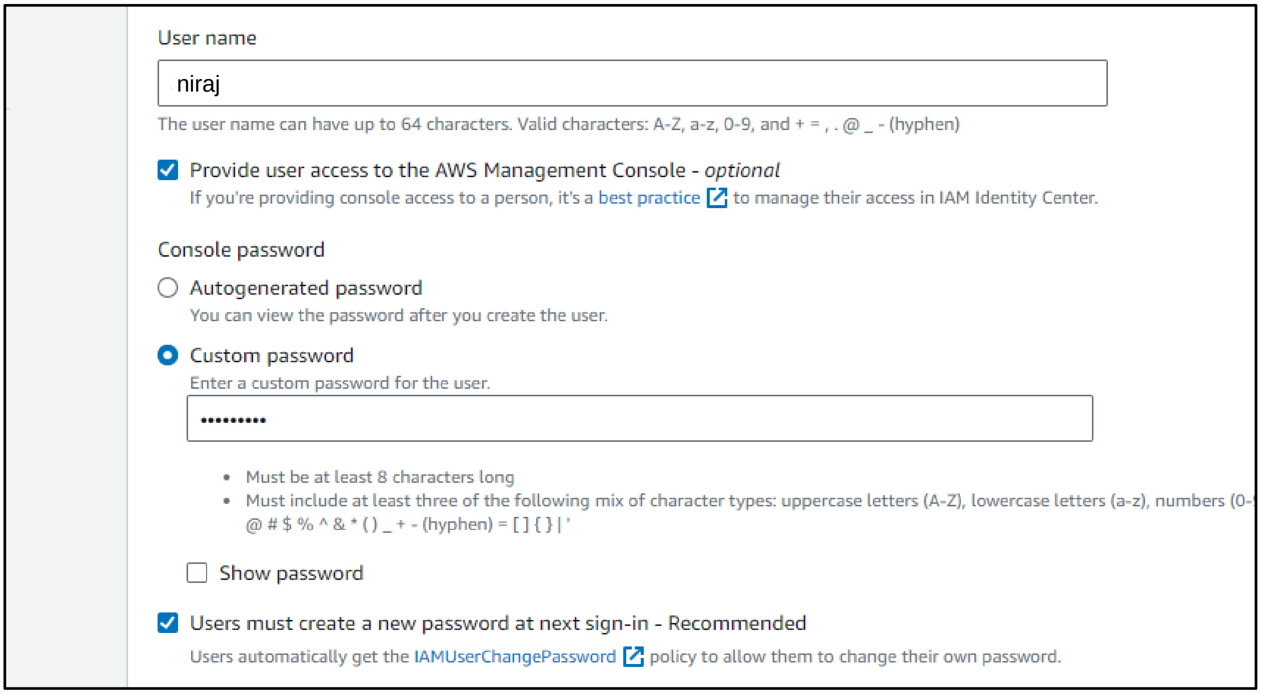
IAM > Users

Users (0) Info

An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

	User name	Path	Groups	Last activity	MFA	Password age

No resources to display



User name

niraj

The user name can have up to 64 characters. Valid characters: A-Z, a-z, 0-9, and + = , . @ _ - (hyphen)

☑ Provide user access to the AWS Management Console - *optional*

If you're providing console access to a person, it's a best practice to manage their access in IAM Identity Center.

Console password

○ Autogenerated password

You can view the password after you create the user.

● Custom password

Enter a custom password for the user.

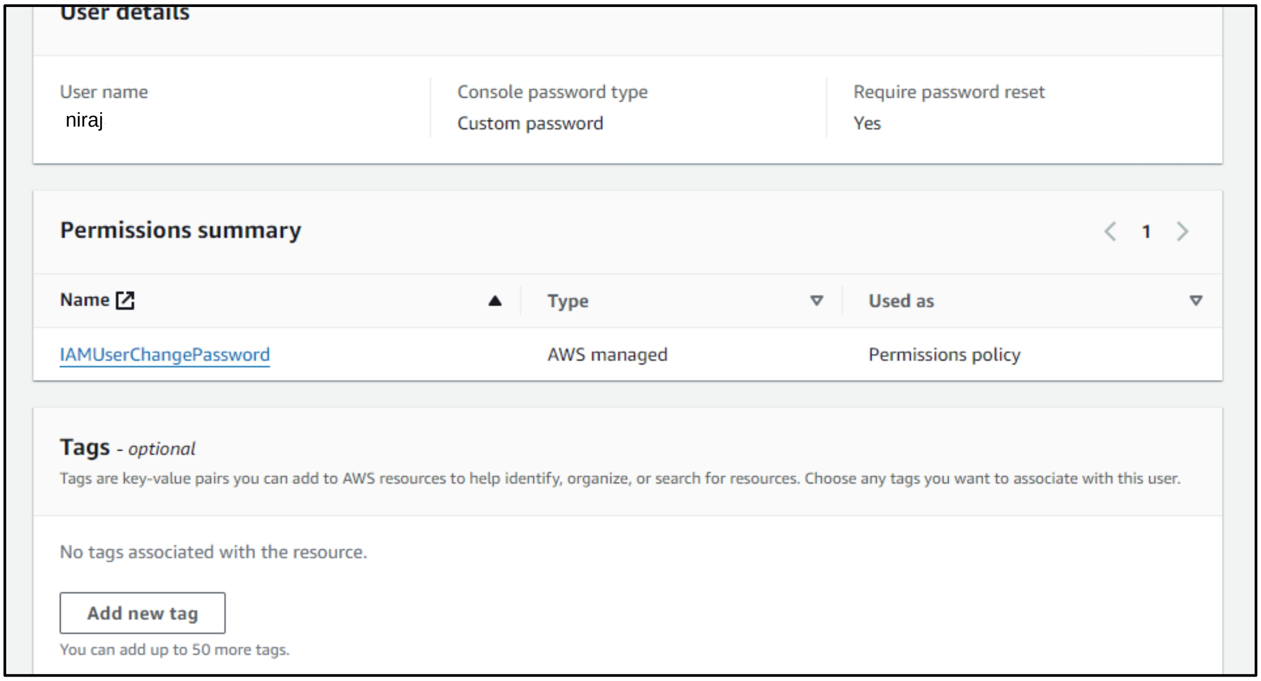
•••••••••

- Must be at least 8 characters long
- Must include at least three of the following mix of character types: uppercase letters (A-Z), lowercase letters (a-z), numbers (0-
@ # $ % ^ & * ( ) _ + - (hyphen) = [ ] { } | '

□ Show password

☑ Users must create a new password at next sign-in - Recommended

Users automatically get the IAMUserChangePassword policy to allow them to change their own password.



User details

User name	Console password type	Require password reset
niraj	Custom password	Yes

Permissions summary

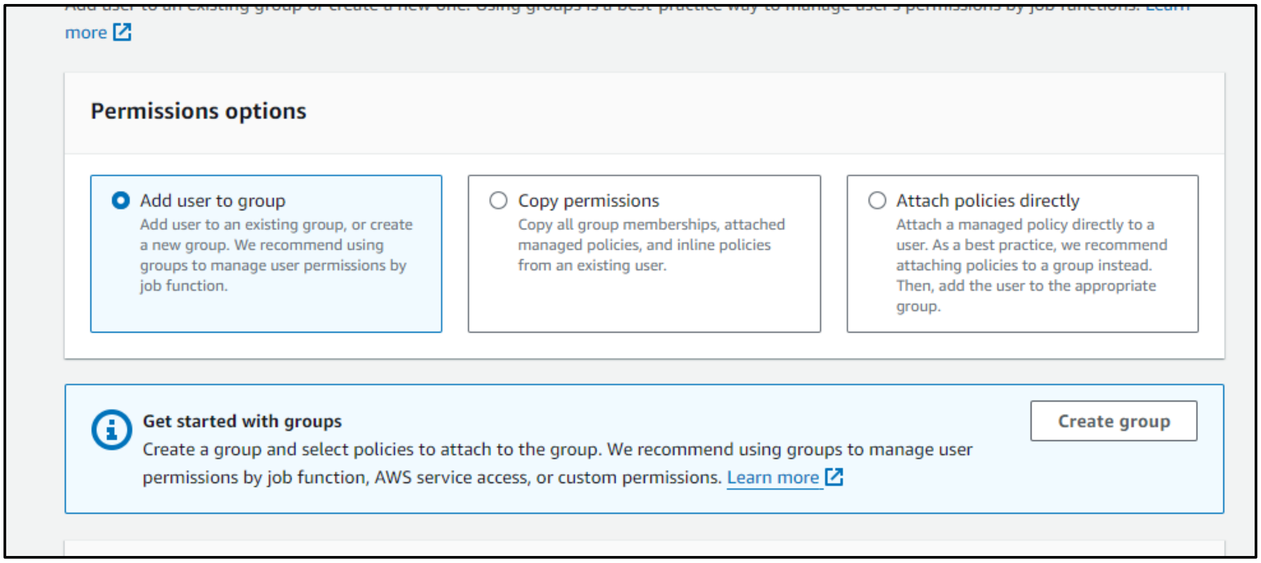
Name	Type	Used as
IAMUserChangePassword	AWS managed	Permissions policy

Tags - *optional*

Tags are key-value pairs you can add to AWS resources to help identify, organize, or search for resources. Choose any tags you want to associate with this user.

No tags associated with the resource.

You can add up to 50 more tags.



Add user to an existing group or create a new one. Using groups is a best-practice way to manage user's permissions by job functions. Learn more

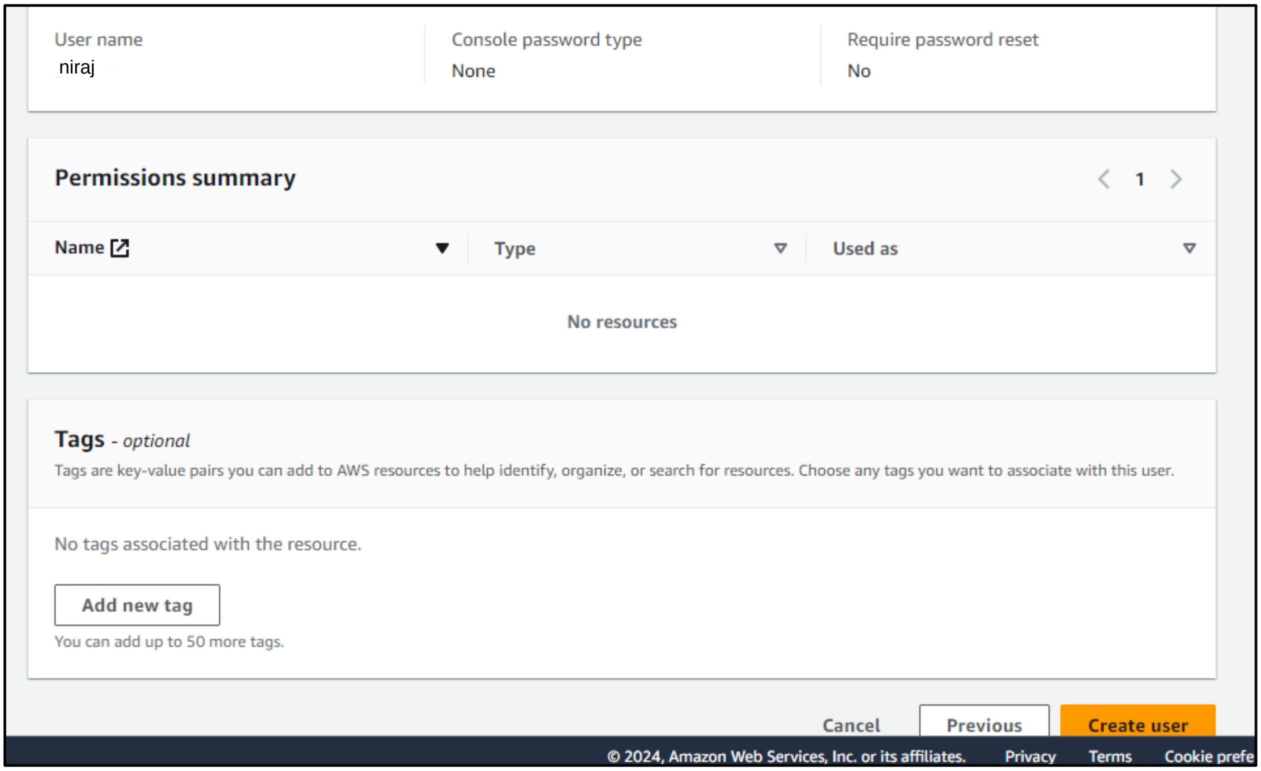
Permissions options

● Add user to group
Add user to an existing group, or create a new group. We recommend using groups to manage user permissions by job function.

○ Copy permissions
Copy all group memberships, attached managed policies, and inline policies from an existing user.

○ Attach policies directly
Attach a managed policy directly to a user. As a best practice, we recommend attaching policies to a group instead. Then, add the user to the appropriate group.

Get started with groups
Create a group and select policies to attach to the group. We recommend using groups to manage user permissions by job function, AWS service access, or custom permissions. Learn more



User name	Console password type	Require password reset
niraj	None	No

Permissions summary

Name	Type	Used as
No resources		

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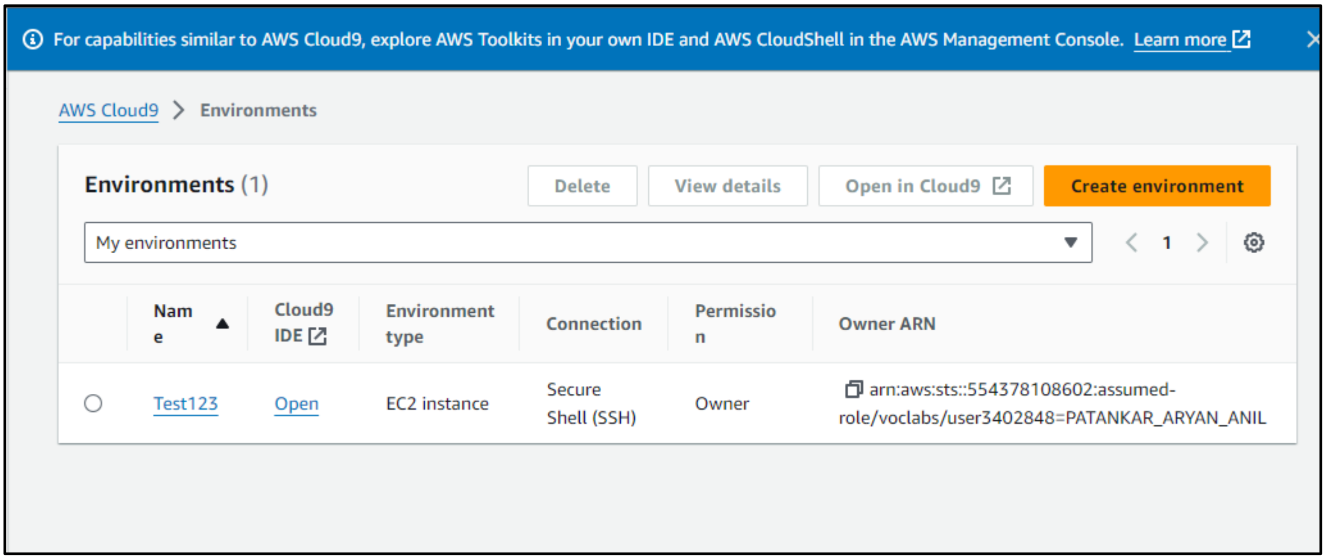
Here the environment has been successfully created



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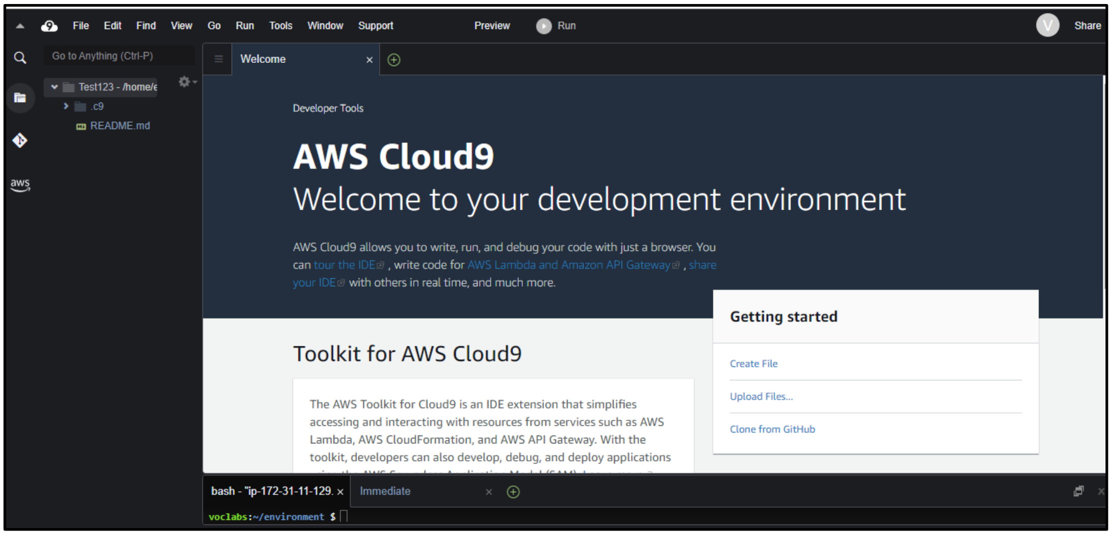
2.We have successfully set up and launched our Cloud9 environment. Over here, we can build and develop programs as per our desire. We are also allowed to collaborate with multiple other users and access shared resources.



Developer Tools

AWS Cloud9

Welcome to your development environment

AWS Cloud9 allows you to write, run, and debug your code with just a browser. You can tour the IDE, write code for AWS Lambda and Amazon API Gateway, share your IDE with others in real time, and much more.

Getting started

Create File

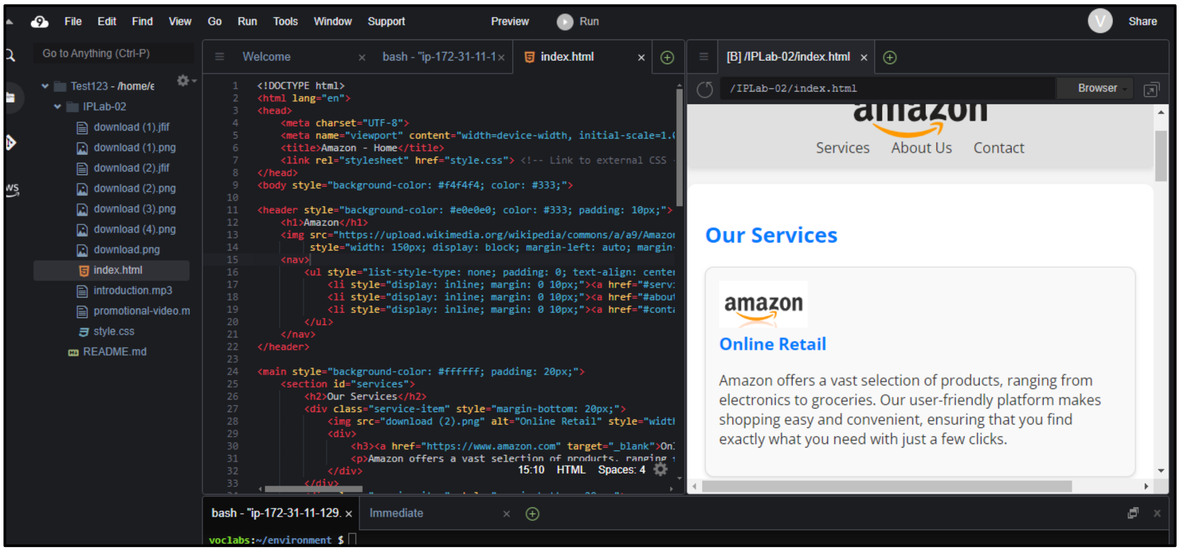
Upload Files...

Clone from GitHub

Toolkit for AWS Cloud9

The AWS Toolkit for Cloud9 is an IDE extension that simplifies accessing and interacting with resources from services such as AWS Lambda, AWS CloudFormation, and AWS API Gateway. With the toolkit, developers can also develop, debug, and deploy applications

```
voclabs:~/environment $
```



```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.(
    <title>Amazon - Home</title>
    <link rel="stylesheet" href="style.css"> <!-- Link to external CSS
</head>
<body style="background-color: #f4f4f4; color: #333;">

<header style="background-color: #e0e0e0; color: #333; padding: 10px;">
    <h1>Amazon</h1>
    <img src="https://upload.wikimedia.org/wikipedia/commons/a/a9/Amazo
         style="width: 150px; display: block; margin-left: auto; margin-
    <nav>
        <ul style="list-style-type: none; padding: 0; text-align: cente
            <li style="display: inline; margin: 0 10px;"><a href="#serv
            <li style="display: inline; margin: 0 10px;"><a href="#abou
            <li style="display: inline; margin: 0 10px;"><a href="#conta
        </ul>
    </nav>
</header>

<main style="background-color: #ffffff; padding: 20px;">
    <section id="services">
        <h2>Our Services</h2>
        <div class="service-item" style="margin-bottom: 20px;">
            <img src="download (2).png" alt="Online Retail" style="widt
            <div>
                <h3><a href="https://www.amazon.com" target="_blank">On
                <p>Amazon offers a vast selection of products, ranging
            </div>
        </div>
```

```
voclabs:~/environment $
```

Our Services

amazon

Online Retail

Amazon offers a vast selection of products, ranging from electronics to groceries. Our user-friendly platform makes shopping easy and convenient, ensuring that you find exactly what you need with just a few clicks.

Further, we are supposed to login from another browser using the credentials of the IAM user, to access the shared cloud9 environment with us. These steps could not be completed because Cloud9 services have been disrupted and there is no access to the IAM user from the remote login.