

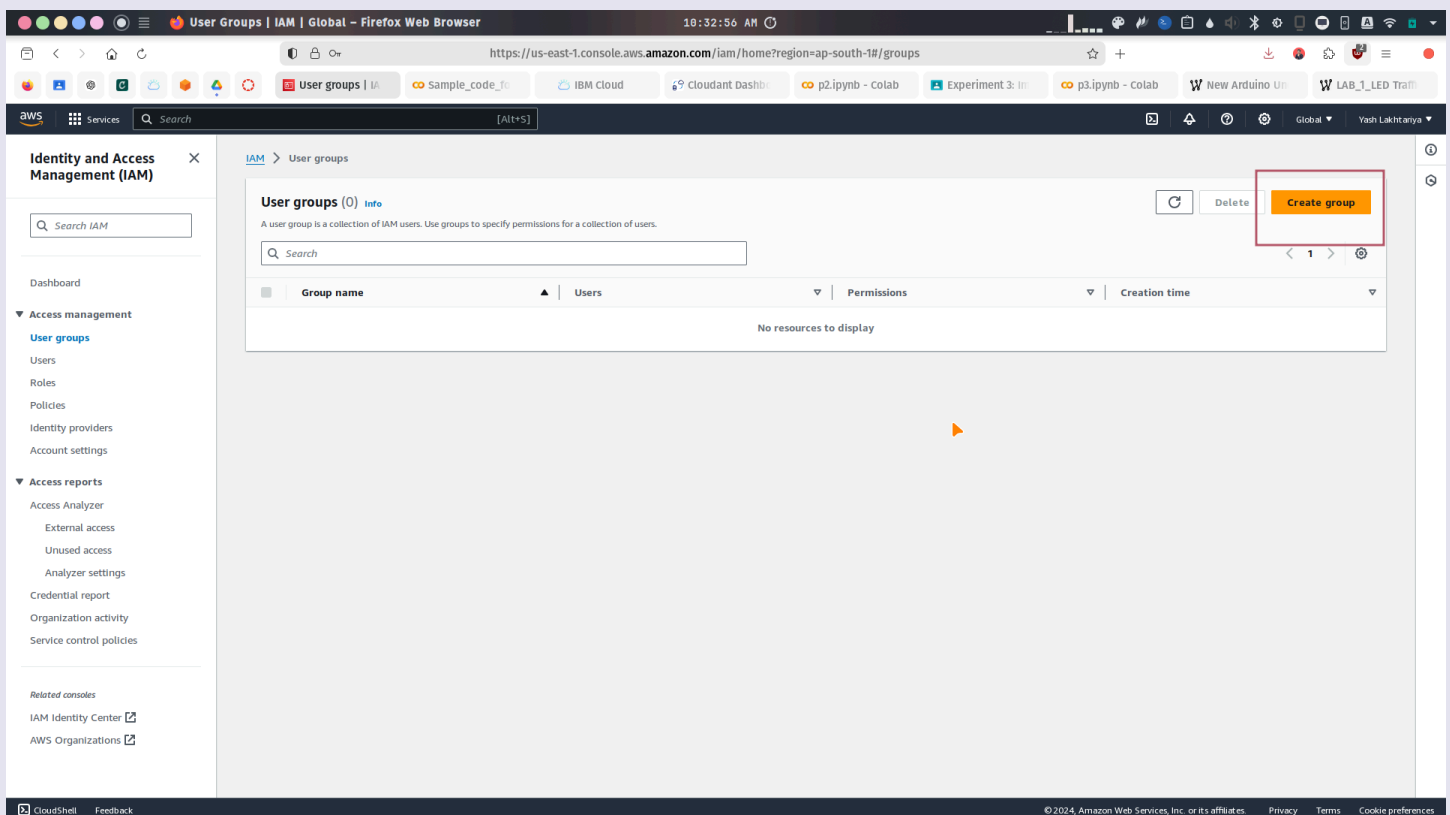
Name - Yash Lakhtariya  
Enrollment number - 21162101012  
Branch - CBA Batch - 71  
CCE Practical 4

**Scenario : Demonstrate the use of Identity and Access Management services using proper configuration for various IAM Users Roles and Policies User wise.**

**Tasks to be completed :**

- Create an IAM users like DevOps, Solution Architect.
- Manage User roles and policies using Identity and Access Management (IAM).
- Create an MFA for all users.

**Screenshots and steps :**



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Create User Group | IAM | Global - Firefox Web Browser

10:33:51 AM

https://us-east-1.console.aws.amazon.com/iam/home?region=ap-south-1#/groups/create

Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

User groups

Users

Roles

Policies

Identity providers

Account settings

Access reports

Access Analyzer

External access

Unused access

Analyzer settings

Credential report

Organization activity

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Related consoles

IAM Identity Center

AWS Organizations

User group name

Enter a meaningful name to identify this group.

YSL\_devops\_grp

Maximum 128 characters. Use alphanumeric and '+', '=', '\_' characters.

Add users to the group - Optional (0)

An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS.

Search

User name

No resources to display

Attach permissions policies - Optional (2/946)

You can attach up to 10 policies to this user group. All the users in this group will have permissions that are defined in the selected policies.

Filter by Type

Search: devops

All types

5 matches

Policy name	Type	Used as	Description
<input checked="" type="checkbox"/> AmazonDevOpsGuruConsoleFullAccess	AWS managed	None	The policy grants full-access to the Dev...
<input checked="" type="checkbox"/> AmazonDevOpsGuruFullAccess	AWS managed	None	Provides full access to Amazon DevOps...
<input type="checkbox"/> AmazonDevOpsGuruOrganizationsAccess	AWS managed	None	Provide access to enable and manage A...
<input type="checkbox"/> AmazonDevOpsGuruReadOnlyAccess	AWS managed	None	Provides read only access to Amazon D...
<input type="checkbox"/> AWSQuickSetupDevOpsGuruPermissionsB...	AWS managed	None	The AWSQuickSetupDevOpsGuruPermi...

Cancel Create user group

Users | IAM | Global - Firefox Web Browser

10:34:20 AM

https://us-east-1.console.aws.amazon.com/iam/home?region=ap-south-1#/users

Identity and Access Management (IAM)

Search IAM

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Credential report

Organization activity

Service control policies

Related consoles

IAM Identity Center

AWS Organizations

YSL\_devops\_grp user group created.

View group

Users (0)

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

Search

User name

Path

Group

Last activity

MFA

Password age

Console last sign-in

Access key ID

Active key age

No resources to display

Create user

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Create User | IAM | Global - Firefox Web Browser

10:36:48 AM

https://us-east-1.console.aws.amazon.com/iam/home?region=ap-south-1#/users/create

flameshot  
Flameshot Info  
Screenshot aborted.

create user | IAM | Sample\_code\_fo

Experiment 3: IBM Cloud p3.ipynb - Colab New Arduino Un LAB\_1\_LED Traff

aws

Services Search [Alt+S]

Step 2  
Set permissions

Step 3  
Review and create

Step 4  
Retrieve password

User details

User name  
yashlo-1  
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.

Are you providing console access to a person?

User type  
☐ Specify a user in Identity Center - Recommended  
We recommend that you use Identity Center to provide console access to a person. With Identity Center, you can centrally manage user access to their AWS accounts and cloud applications.  
☒ I want to create an IAM user  
We recommend that you create IAM users only if you need to enable programmatic access through access keys, service-specific credentials for AWS CodeCommit or Amazon Keyspaces, or a backup credential for emergency account access.

Console password

☐ Autogenerated password  
You can view the password after you create the user.  
☒ Custom password  
Enter a custom password for the user.  
ChalFuYashla\_00  

- 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 (0-9), and symbols ! @ # \$ % ^ & \* ( ) \_ + - (hyphen) = [ ] { } ' "

[Show password](#)

☐ Users must create a new password at next sign-in - Recommended  
Users automatically get the [IAM Basic Change Password](#) policy to allow them to change their own password.

If you are creating programmatic access through access keys or service-specific credentials for AWS CodeCommit or Amazon Keyspaces, you can generate them after you create this IAM user. [Learn more](#)

Cancel Next

Create User | IAM | Global - Firefox Web Browser

10:38:40 AM

https://us-east-1.console.aws.amazon.com/iam/home?region=ap-south-1#/users/create

create user | IAM | Sample\_code\_fo

IBM Cloud Cloudant Dashb p2.ipynb - Colab Experiment 3: IBM p3.ipynb - Colab New Arduino Un LAB\_1\_LED Traff

aws

Services Search [Alt+S]

IAM > Users > Create user

Step 1  
[Specify user details](#)

Step 2  
Set permissions

Step 3  
Review and create

Step 4  
Retrieve password

Set permissions

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.

User groups (1/1)

☒ Group name [YSL\\_devops\\_grp](#)

Users0

Attached policies [AmazonDevOpsGuruFullAccess and AmazonDev...](#)

Created2024-08-21 (4 minutes ago)

[Create group](#)

Set permissions boundary - optional

Cancel Previous Next

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The screenshot shows the AWS IAM console in a Firefox browser. The page title is 'Create User | IAM | Global'. The URL is 'https://us-east-1.console.aws.amazon.com/iam/home?region=ap-south-1#/users/create'. The left sidebar shows the navigation menu with 'IAM > Users > Create user' selected. The main content area is titled 'Review and create' and includes a sub-header 'Review your choices. After you create the user, you can view and download the autogenerated password, if enabled.' The 'User details' section shows 'User name' as 'yashlo-1', 'Console password type' as 'Custom password', and 'Require password reset' as 'No'. The 'Permissions summary' section shows a table with one entry: 'YSL\_devops\_grp' (Group) used as a 'Permissions group'. The 'Tags - optional' section shows 'No tags associated with the resource' and an 'Add new tag' button. At the bottom right, there are three buttons: 'Cancel', 'Previous', and 'Create user' (highlighted with a red box).

18:48:52 AM

https://us-east-1.console.aws.amazon.com/iam/home?region=ap-south-1#/users/create

create user | IAM | Sample\_code\_fo | IBM Cloud | Cloudant dashb | p2.ipynb - Colab | Experiment 3: In | p3.ipynb - Colab | New Arduino Un | LAB\_1\_LED Tra

Services Search [Alt+S]

IAM > Users > Create user

Step 1  
Specify user details

Step 2  
Set permissions

Step 3  
Review and create

Step 4  
Retrieve password

### Review and create

Review your choices. After you create the user, you can view and download the autogenerated password, if enabled.

#### User details

User name yashlo-1	Console password type Custom password	Require password reset No
-----------------------	--	------------------------------

#### Permissions summary

Name	Type	Used as
YSL_devops_grp	Group	Permissions group

#### 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.

Add new tag

You can add up to 50 more tags.

Cancel Previous **Create user**

CloudShell Feedback

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---

18:41:27 AM

https://us-east-1.console.aws.amazon.com/iam/home?region=ap-south-1#/users/create

create user | IAM | Sample\_code\_fo | IBM Cloud | Cloudant Dashb | p2.ipynb - Colab | Experiment 3: In | p3.ipynb - Colab | New Arduino Un | LAB\_1\_LED Tra

Services Search [Alt+S]

IAM > Users > Create user

Step 1  
Specify user details

Step 2  
Set permissions

Step 3  
Review and create

Step 4  
Retrieve password

### Retrieve password

You can view and download the user's password below or email users instructions for signing in to the AWS Management Console. This is the only time you can view and download this password.

#### Console sign-in details

Email sign-in instructions

Console sign-in URL https://730355462491.signin.aws.amazon.com/console
User name yashlo-1
Console password ***** Show

Cancel Download .csv file **Return to users list**

if required, password can be saved

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Create User | IAM | Global - Firefox Web Browser

18:42:44 AM

https://us-east-1.console.aws.amazon.com/iam/home?region=ap-south-1#/users/create

create user | IAM | Sample\_code\_fo | IBM Cloud | Cloudant dashb | p2.ipynb - Colab | Experiment 3: In | p3.ipynb - Colab | New Arduino Un | LAB\_1\_LED Tra

Services Search [Alt+S]

IAM > Users > Create user

Step 1 Specify user details  
Step 2 Set permissions  
Step 3 Review and create  
Step 4 Retrieve password

### Review and create

Review your choices. After you create the user, you can view and download the autogenerated password, if enabled.

#### User details

User name yashlo-2	Console password type Autogenerated	Require password reset No
-----------------------	--	------------------------------

#### Permissions summary

Name	Type	Used as
YSL_devops_grp	Group	Permissions group

#### 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.

Add new tag

You can add up to 50 more tags.

Cancel Previous Create user

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Create User Group | IAM | Global - Firefox Web Browser

18:46:47 AM

https://us-east-1.console.aws.amazon.com/iam/home?region=ap-south-1#/groups

create user group | IAM | Sample\_code\_fo | IBM Cloud | Cloudant dashb | p2.ipynb - Colab | Experiment 3: In | p3.ipynb - Colab | New Arduino Un | LAB\_1\_LED Tra

Services Search [Alt+S]

Identity and Access Management (IAM)

Search IAM

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Related consoles

IAM Identity Center

AWS Organizations

### Creating Group.

IAM > User groups > Create user group

### Create user group

#### Name the group

User group name

Enter a meaningful name to identify this group.

YSL\_sltn\_artct

Maximum 128 characters. Use alphanumeric and '+', '@', '\_' characters.

#### Add users to the group - Optional (2)

An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS.

Search

User name	Groups	Last activity	Creation time
yashlo-1	1	None	5 minutes ago
yashlo-2	1	None	3 minutes ago

#### Attach permissions policies - Optional (4/946)

You can attach up to 10 policies to this user group. All the users in this group will have permissions that are defined in the selected policies.

Search

Filter by Type

All types

Policy name	Type	Used as	Description
AdministratorAccess	AWS managed - job function	None	Provides full access to AWS services an...

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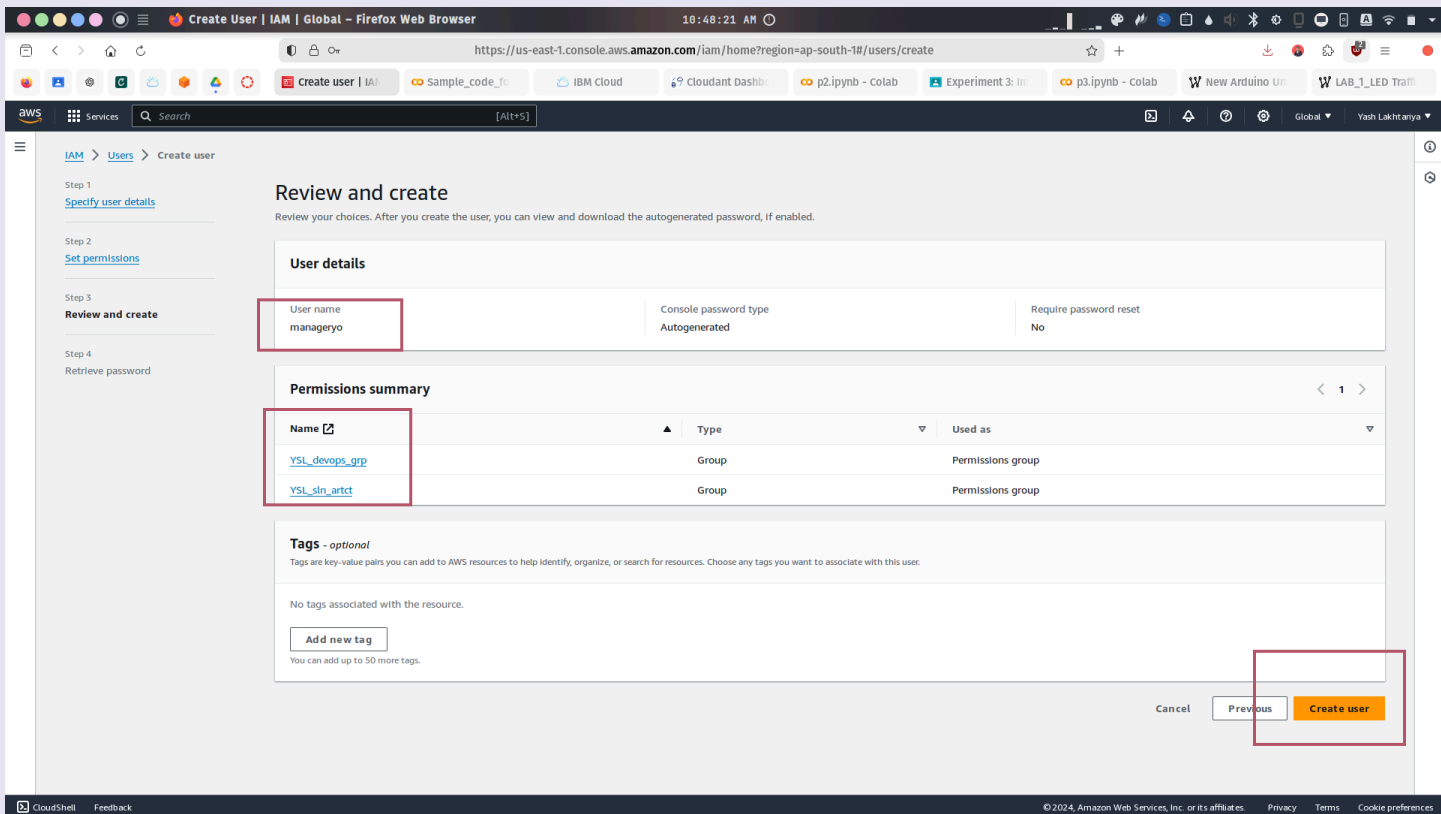
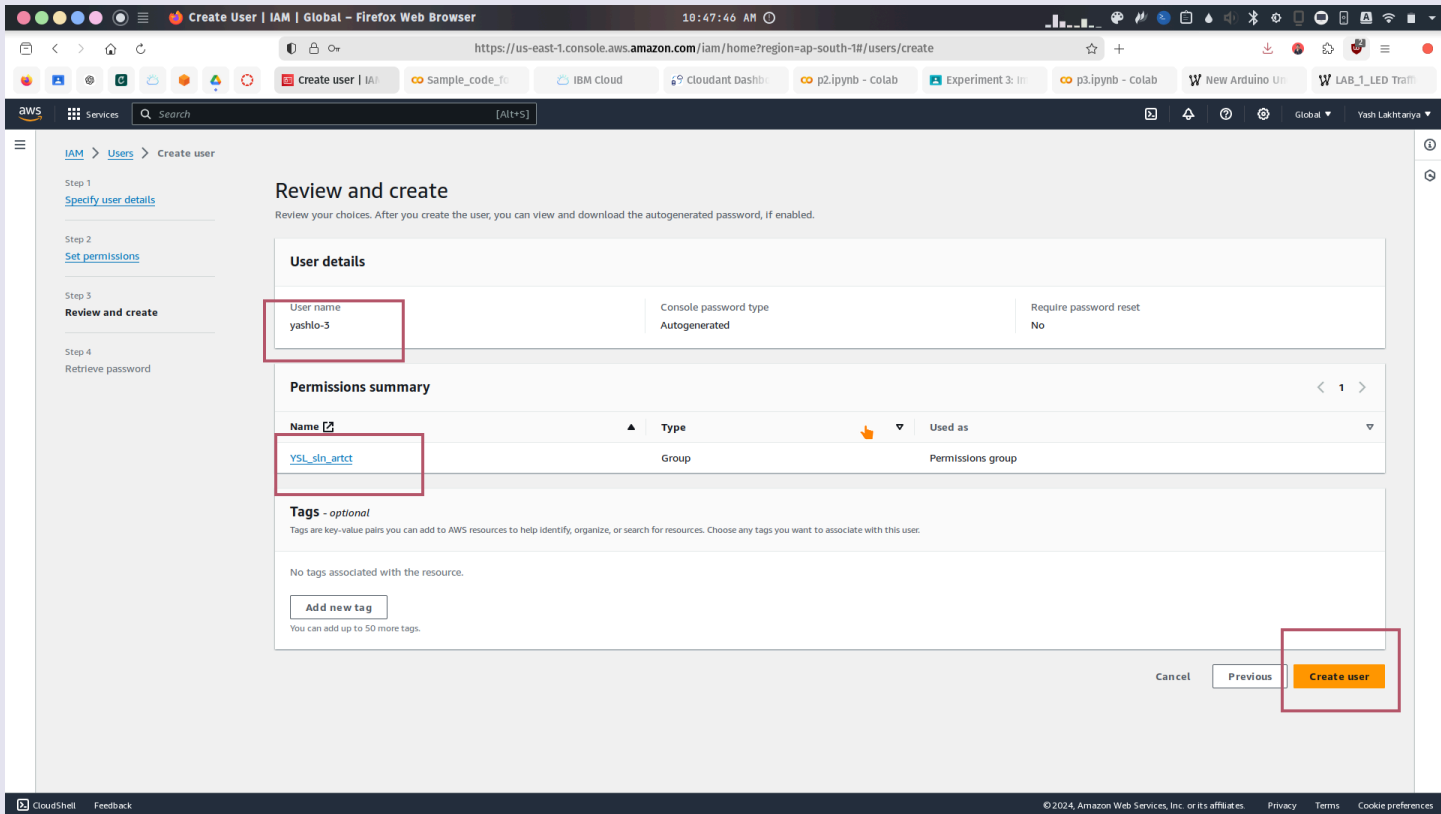
The screenshot shows the AWS IAM console interface. The left sidebar contains navigation links for Identity and Access Management (IAM), Access management, Access reports, and Related consoles. The main content area displays the 'Permissions policies (4)' section for the 'YSL\_slm\_artct' user group. A table lists the attached policies, with the first four rows highlighted by a red box. The table has columns for Policy name, Type, and Attached entities.

<input type="checkbox"/>	Policy name	Type	Attached entities
<input type="checkbox"/>	<a href="#">AdministratorAccess-AWSElasticBeanstalk</a>	AWS managed	1
<input type="checkbox"/>	<a href="#">AmazonEC2FullAccess</a>	AWS managed	1
<input type="checkbox"/>	<a href="#">AmazonRDSFullAccess</a>	AWS managed	1
<input type="checkbox"/>	<a href="#">AmazonS3FullAccess</a>	AWS managed	1

The screenshot shows the AWS IAM console interface during the 'Set permissions' step of creating a new user. The left sidebar indicates the current step is 'Set permissions'. The main content area shows three permission options: 'Add user to group' (selected), 'Copy permissions', and 'Attach policies directly'. Below this, a table titled 'User groups (1/2)' lists available groups. The group 'YSL\_slm\_artct' is selected with a checkbox. At the bottom, there is a 'Set permissions boundary - optional' section and a 'Next' button highlighted in orange.

Group name	Users	Attached policies	Created
<input type="checkbox"/> YSL_devops_grp	2	AmazonDevOpsGuruFullAccess and AmazonDev...	2024-08-21 (13 minutes ago)
<input checked="" type="checkbox"/> YSL_slm_artct	0	AmazonEC2FullAccess, AmazonRDSFullAccess a...	2024-08-21 (Now)

Name - Yash Lakhtariya  
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Security Credentials | IAM | Global - Firefox Web Browser

18:48:59 AM

https://us-east-1.console.aws.amazon.com/iam/home#/security\_credentials

Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

- User groups
- Users
- Roles
- Policies
- Identity providers
- Account settings

Access reports

- Access Analyzer
- External access
- Unused access
- Analyzer settings
- Credential report
- Organization activity
- Service control policies

Related consoles

- IAM Identity Center
- AWS Organizations

### My security credentials

The root user has access to all AWS resources in this account, and we recommend following [best practices](#). To learn more about the types of AWS credentials and how they're used, see [AWS Security Credentials](#) in AWS General Reference.

**You don't have MFA assigned**  
As a security best practice, we recommend you assign MFA.

**Account details**

Account name: Yash Lakhtariya

Email address: yashlakhtariya1010@gmail.com

AWS account ID: 730335462491

Canonical user ID: \*

**Multi-factor authentication (MFA) (0)**

Use MFA to increase the security of your AWS environment. Signing in with MFA requires an authentication code from an MFA device. Each user can have a maximum of 8 MFA devices assigned. [Learn more](#)

No MFA devices. Assign an MFA device to improve the security of your AWS environment.

**Access keys (0)**

Use access keys to send programmatic calls to AWS from the AWS CLI, AWS Tools for PowerShell, AWS SDKs, or direct AWS API calls. You can have a maximum of two access keys (active or inactive) at a time. [Learn more](#)

[Edit account](#)

[Assign MFA device](#)

[Create access key](#)

Security Credentials | IAM | Global - Firefox Web Browser

18:49:13 AM

https://us-east-1.console.aws.amazon.com/iam/home#/security\_credentials

Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

- User groups
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Related consoles

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- AWS Organizations

### My security credentials

The root user has access to all AWS resources in this account, and we recommend following [best practices](#). To learn more about the types of AWS credentials and how they're used, see [AWS Security Credentials](#) in AWS General Reference.

**You don't have MFA assigned**  
As a security best practice, we recommend you assign MFA.

**Account details**

Account name: Yash Lakhtariya

Email address: yashlakhtariya1010@gmail.com

AWS account ID: 730335462491

Canonical user ID: 4870461b000a05ac4254d0dc4661fd34b48f1c567db68173167e68298e3009bf

**Multi-factor authentication (MFA) (0)**

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No MFA devices. Assign an MFA device to improve the security of your AWS environment.

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Use access keys to send programmatic calls to AWS from the AWS CLI, AWS Tools for PowerShell, AWS SDKs, or direct AWS API calls. You can have a maximum of two access keys (active or inactive) at a time. [Learn more](#)

[Assign MFA](#)

[Edit account name, email, and password](#)

[Assign MFA device](#)

[Create access key](#)



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Assign MFA Device | IAM | Global - Firefox Web Browser

10:49:39 AM

https://us-east-1.console.aws.amazon.com/iam/home#/security\_credentials/mfa

Assign MFA device | Sample\_code\_fo | IBM Cloud | Cloudant Dashb | p2.ipynb - Colab | Experiment 3: In | p3.ipynb - Colab | New Arduino Un | LAB\_1\_LED Tra

Step 1  
Select MFA device

Step 2  
Set up device

### Select MFA device

**MFA device name**

Device name  
This name will be used within the identifying ARN for this device.

yashlano\_phone

Maximum 64 characters. Use alphanumeric and '+', '@', '-' characters.

**MFA device**

Device options  
In addition to username and password, you will use this device to authenticate into your account.

☐ Passkey or security key  
Authenticate using your fingerprint, face, or screen lock. Create a passkey on this device or use another device, like a FIDO2 security key.

☒ Authenticator app  
Authenticate using a code generated by an app installed on your mobile device or computer.

☐ Hardware TOTP token  
Authenticate using a code generated by Hardware TOTP token or other hardware devices.

Cancel Next

Kamoso

10:52:10 AM

https://us-east-1.console.aws.amazon.com/iam/home#/security\_credentials/mfa


Assign MFA device | Sample\_code\_fo | IBM Cloud | Cloudant Dashb | p2.ipynb - Colab | Experiment 3: In | p3.ipynb - Colab | New Arduino Un | LAB\_1\_LED Tra

Step 1  
Select MFA device

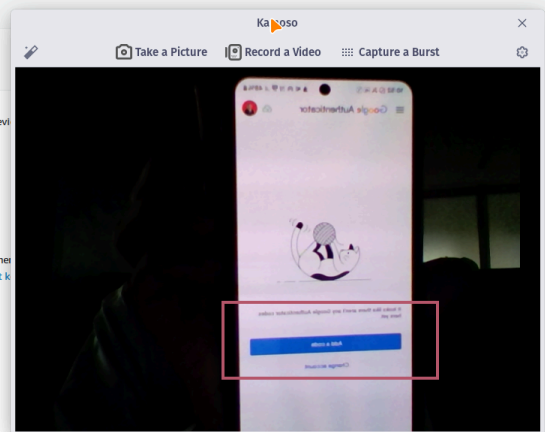
Step 2  
Set up device

### Set up device

**Authenticator app**  
A virtual MFA device is an application running on your device that you can configure by scanning a QR code.

- 1 Install a compatible application such as Google Authenticator, Duo Mobile, or Authy app on your mobile device or computer.  
[See a list of compatible applications](#)
- 2  Open your authenticator app, choose **Show QR code** on this page, then scan the code. Alternatively, you can type a secret key. [Show secret key](#)
- 3 Type two consecutive MFA codes below  
Enter a code from your virtual app below  
MFA Code 1  
Wait 30 seconds, and enter a second code entry.  
MFA Code 2

Cancel Previous Add MFA



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Enrollment number - 21162101012  
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Assign MFA Device | IAM | Global - Firefox Web Browser

10:53:08 AM

https://us-east-1.console.aws.amazon.com/iam/home#/security\_credentials/mfa

Assign MFA device


Step 1  
Select MFA device

Step 2  
Set up device

### Set up device

#### Authenticator app

A virtual MFA device is an application running on your device that you can configure by scanning a QR code.

1. Install a compatible application such as Google Authenticator, Duo Mobile, or Authy app on your mobile device or computer.  
[See a list of compatible applications](#)
2.   
Open your authenticator app, choose **Show QR code** on this page, then use the app to scan the code. Alternatively, you can type a secret key. [Show secret key](#)
3. Type two consecutive MFA codes below  
Enter a code from your virtual app below  
  
Wait 30 seconds, and enter a second code entry.

Cancel Previous **Add MFA**

Security Credentials | IAM | Global - Firefox Web Browser

10:53:21 AM

https://us-east-1.console.aws.amazon.com/iam/home#/security\_credentials

Security Credentials

Identity and Access Management (IAM)

Search IAM

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- Credential report
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- Service control policies

Related consoles

- [IAM Identity Center](#)
- [AWS Organizations](#)

**MFA device assigned**

You can register up to 8 MFA devices of any combination of the current session through the AWS CLI with that user.

### My security credentials

The root user has access to all AWS resources in this account, and we recommend following [best practices](#). To learn more about the types of AWS credentials and how they're used, see [AWS Security Credentials](#) in AWS General Reference.

#### Account details

[Edit account name, email, and password](#)

Account name  
Yash Lakhtariya

Email address  
yashlakhtariya1010@gmail.com

AWS account ID  
730335462491

Canonical user ID  
4870461b000a05ac4254d0dc4661fd34b48f1c567db68173167e68298e3009bf

#### Multi-factor authentication (MFA) (1)

Use MFA to increase the security of your AWS environment. Signing in with MFA requires an authentication code from an MFA device. Each user can have a maximum of 8 MFA devices assigned. [Learn more](#)

[Remove](#) [Resync](#) [Assign MFA device](#)

Type	Identifier	Certifications	Created on
<input type="radio"/> Virtual	amaws:iam:730335462491:mfa/yashlano_phone	Not Applicable	Wed Aug 21 2024

#### Access keys (0)

Use access keys to send programmatic calls to AWS from the AWS CLI, AWS Tools for PowerShell, AWS SDKs, or direct AWS API calls. You can have a maximum of two access keys (active or inactive) at a time. [Learn more](#)

[Create access key](#)

Access key ID	Created on	Access key last used	Region last used	Service last used	Status
No access keys					

As a best practice, avoid using long-term credentials like access keys. Instead, use tools which provide short term credentials. [Learn more](#)

[Create access key](#)

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