LAB – 5: - Introduction to AWS IAM (Identity and Access Management)

In this lab, you will learn :

- Exploring pre-created IAM Users and Groups
- Inspecting IAM policies as applied to the pre-created groups
- Locating and using the IAM sign-in URL
- Experimenting with the effects of policies on service access

Introduction to AWS Educate:

AWS Educate is an online platform built by Amazon that enables users to learn AWS by providing access to online training resources and labs to learn, practice, and evaluate cloud skills without having to create an Amazon or AWS account. In this course, we will be working with AWS Educate, which familiarizes you with AWS.

Setting up an AWS Educate account :

1. Click here to go to AWS Educate.
2. Click on “Register Now”
3. Provide your **SRN** as the First Name and your **name** as the last name while filling the required details to register.
4. Verify the given email address to complete the registration.
5. Set a password for the AWS Educate account
6. Login into your account and choose the course **“Introduction to Cloud 101”**
7. Under modules choose the module “Lab 6 - Introduction to AWS IAM”
8. Explore the course!

What is AWS IAM?

AWS Identity and Access Management (IAM) is a web service that helps you securely control access to AWS resources. With IAM, you can centrally manage permissions that control which AWS resources users can access. You use IAM to control who is authenticated (signed in) and authorized (has permissions) to use resources.IAM enables the organization to create multiple users, each with its own security credentials, controlled and billed to a single aws account. IAM allows the user to do only what they need to do as a part of the user's job.

Some essential features of IAM are

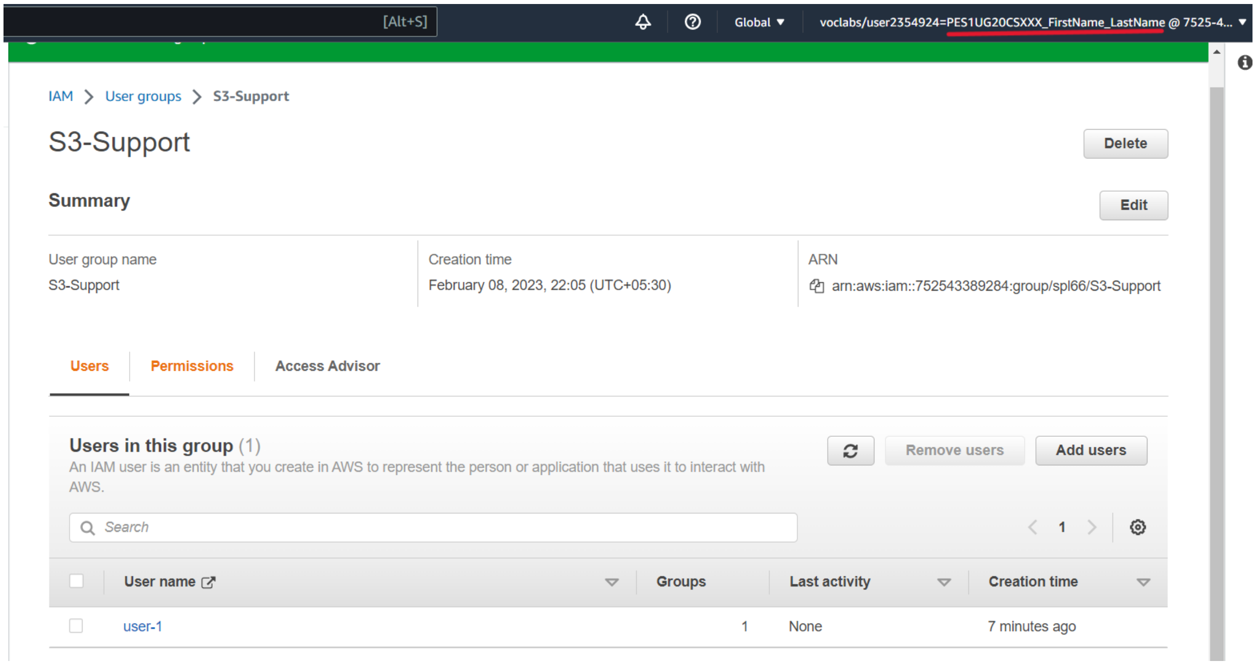
- **Shared access to your AWS account** - You can grant other people permission to administer and use resources in your AWS account without having to share your password or access key.
- **Granular permissions** - You can grant different permissions to different people for different resources. For example, you might allow some users complete access to Amazon Elastic Compute Cloud (Amazon EC2), Amazon Simple Storage Service (Amazon S3), Amazon DynamoDB, Amazon Redshift, and other AWS services.
- **Secure access to AWS resources for applications that run on Amazon EC2** - You can use IAM features to securely provide credentials for applications that run on EC2 instances. These credentials provide permissions for your application to access other AWS resources.
- **Eventually Consistent:** IAM service is eventually consistent as it achieves high availability by replicating the data across multiple servers within the Amazon's data center around the world.
- **Multi Factor Authentication:** An AWS provides multi factor authentication as we need to enter the username, password, and security check code to log in to the AWS Management Console.

Deliverables:

The following screenshots are to be submitted:

- *user-1* added to the S3-Support Group.
- *user-2* added to the EC2-Support Group.
- *user-3* added to the EC2-Support Group.
- View S3 buckets with *user-1* role
- EC2 instance dashboard with *user-1* role (Not authorized)
- Failure message when instance stopped with *user-2* role
- Successful stoppage of E2 instance with *user-3* *role*

NOTE : Make sure the account name(containing SRN) on the top right is visible in the screenshots submitted (Shown in the below screenshot)


[Alt+S]
Global ▼
voclabs/user2354924=PES1UG20CSXXX_FirstName_LastName @ 7525-4... ▼
IAM > User groups > S3-Support
Delete
Edit
Users
Permissions
Access Advisor
Remove users
Add users
Search
1

S3-Support

Summary

User group name: S3-Support

Creation time: February 08, 2023, 22:05 (UTC+05:30)

ARN: arn:aws:iam::752543389284:group/spl66/S3-Support

Users in this group (1)

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

User name	Groups	Last activity	Creation time
user-1	1	None	7 minutes ago

NOTE : The screenshots must be pasted into a Word document and sent in PDF format. The file should be named in this manner **<Section>_<SRN>_<Name>_E5.pdf** (Eg. A_PES1UG20CSXXX_Name_E5.pdf)

Points to note:

1. AWS Educate will create a temporary AWS account with all the required permissions and access to complete the lab. **Do not** use your personal AWS account. To prevent conflicts with any AWS account that you have already signed into on your browser, use incognito mode.
2. **DO NOT** change the default region/ VPC or any other settings that are automatically created by AWS Educate.
3. The AWS Educate lab session is timed. When the time limit is reached/the timer expires, the AWS account is deleted, and you must restart the lab from the beginning.
4. All code and configuration for the AWS Educate lab have already been given. You are not required to code anything from scratch or deviate from this for the lab experiments. However, in some cases, you may be required to name the resources you use differently, as instructed.
5. The assignments may require you to deviate from the AWS Educate instructions and use your own code. Instructions will be given.
6. **DO NOT** try to access or avail any other resources and services that have not been described in the lab session or your account will be blocked.
7. Ensure that you have signed into AWS Educate from your mail account.