Lab 11 - Introduction to AWS Identity and Access Management (IAM)

# Week 11 Tasks:

# Explore the Users and Groups

* 1. 1a.png - list of groups showing that they have zero users in each group
  2. 1b.png - Showing policy for EC2-Support group.

# Add Users to the Groups

* 1. 2a.png - Showing each user with the groups they have been added to.
  2. 2b.png - Showing each group having one user.

# Testing User Access

* 1. 3a.png-Showing User-1 having access to view details S3-Bucket
  2. 3b.png-Showing User-1 having NO access to view details EC-2 Instances
  3. 3c.png-Showing User-2 having access view details EC-2 Instances, but not able to stop instance.
  4. 3d.png-Showing User-2 having NO access view details S3-Bucket.
  5. 3e.png-Showing User-3 having able to stop instance, since the user is a admin

1. 4a.png or 4a.jpg – Showing email confirmation from QWIKLABS for having completed the lab successfully. The SS should clearly show the timestamp in the received email.

**Introduction to Qwiklabs**

Qwiklabs is an online platform that provides end to end training in Cloud Services. This a platform where you can learn in a live environment anywhere, anytime and on any device. Qwiklabs offers training through various Labs which are specially designed to get you trained in Google Cloud Platform (GCP) as well as Amazon Web Services (AWS). Qwiklabs has joined hands with Google and now works as a part of Google Cloud. Every year Qwiklabs delivers thousands of labs and has happy learners all over the globe.

**Points to Note:**

1. **Although Qwiklabs uses AWS, you will NOT be using your AWS Educate Account. Qwiklabs will create a temporary AWS account with all the required permissions and access to complete the lab.**
2. **When using the Qwiklabs created AWS account, DO NOT change the default region/VPC or any other settings that are automatically created by Qwiklabs.**
3. **The Qwiklabs lab has a time limit (45 minutes) within which the Qwiklab lab has to complete, after the timer hits zero, the AWS account will be removed and you will have to restart the lab from scratch.**
4. **All code and config for Qwiklab labs is already given, you need not code anything from scratch.**
5. **To prevent conflicts with any AWS account that you have already signed into the browser, use Incognito/Private mode, to ensure you have a fresh browser with not previous logins.**
6. **Ensure that you have signed into Qwiklabs using your Google account.**

**Introduction to IAM**

AWS Identity and Access Management (IAM) enables you to manage access to AWS services and resources securely. Using IAM, you can create and manage AWS users and groups, and use permissions to allow and deny their access to AWS resources.

IAM is a feature of your AWS account offered at no additional charge. You will be charged only for use of other AWS services by your users.

**How it works?**

**IAM assists in creating roles and permissions. AWS IAM allows you to:**

**Manage IAM users and their access –** You can create users in IAM, assign them individual security credentials (in other words, access keys, passwords, and multi-factor authentication devices), or request temporary security credentials to provide users access to AWS services and resources. You can manage permissions in order to control which operations a user can perform.

**Manage IAM roles and their permissions –** You can create roles in IAM and manage permissions to control which operations can be performed by the entity, or AWS service, that assumes the role. You can also define which entity is allowed to assume the role. In addition, you can use service-linked roles to delegate permissions to AWS services that create and manage AWS resources on your behalf.

**Manage federated users and their permissions –** You can enable identity federation to allow existing identities (users, groups, and roles) in your enterprise to access the AWS Management Console, call AWS APIs, and access resources, without the need to create an IAM user for each identity. Use any identity management solution that supports SAML 2.0, or use one of our federation samples (AWS Console SSO or API federation).

Click on the link below to go to Qwiklabs lab (and then click **Join to Start this Lab** followed by **Start Lab** after which you will see **Open Console** button appearing on the left panel after 1 to 2 minutes) [**AWS IAM**](https://amazon.qwiklabs.com/focuses/15717?catalog_rank=%7B%22rank%22%3A1%2C%22num_filters%22%3A0%2C%22has_search%22%3Atrue%7D&parent=catalog&search_id=9346229)

**Note**: Before you click **Start Lab**, make sure you review the following 3 Tasks and then execute all these tasks in **45 minutes**

**Task-1**: Explore the Users and Groups (You need to execute Steps 3-21 here)

**Task-2**: Add Users to Groups (Execute Steps 22-29)

**Task-3**: Sign-In and Test Users (Execute Steps 30-59)

**Task-4**: End Lab (Execute Steps 60-64)

**During Task-3 you will be asked to logout and log in with a different user ID three times, so note down the Account ID and the user sign-in link (which will look similar to** [**https://123456789012.signin.aws.amazon.com/console**](https://123456789012.signin.aws.amazon.com/console)**) displayed on IAM dashboard in a separate text file. In this link 123456789012 denotes the Account ID which you will need to login with a different user id.**

**If your lab time expires in the middle, you can start a new lab and go straight to Task-2 Step 22 (if you have saved SS of Task-1 already).**