LAB – 1: - Introduction to AWS EC2 (Elastic Compute Cloud)

In this lab, you will learn :

- Launching an Amazon EC2 instance
- Monitoring an Amazon EC2 instance.
- Updating security group of instance and accessing web server
- Resizing an instance
- Stopping & terminating an instance

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 2 - Introduction to Amazon EC2”
8. Explore the course!

What is AWS EC2?

The AWS EC2 (Elastic Compute) service is one of the most essential services. This offers the actual computation for your cloud apps and is as scalable as any cloud service should be.

Amazon provides various types of instances with different configurations of CPU, memory, storage, and networking resources to suit user needs. Each type is available in various sizes to address specific workload requirements.

Some essential features of EC2 are

- EC2 instances are on-demand that are reliable and scalable infrastructures with the ability to increase and decrease the capacity within minutes.
- Configurable CPUs, memory storage, and networking capacity are called the instance types, to run your applications or software on the instance.
- Instance store volumes for temporary data that are deleted when you stop or terminate your instance.
- Amazon EC2 infrastructure is programmable and you can use scripts to automate the deployment process, install and configure.
- Public and private key pairs for secure login into instances.

Each EC2 instance has the following mandatory configuration requirements:

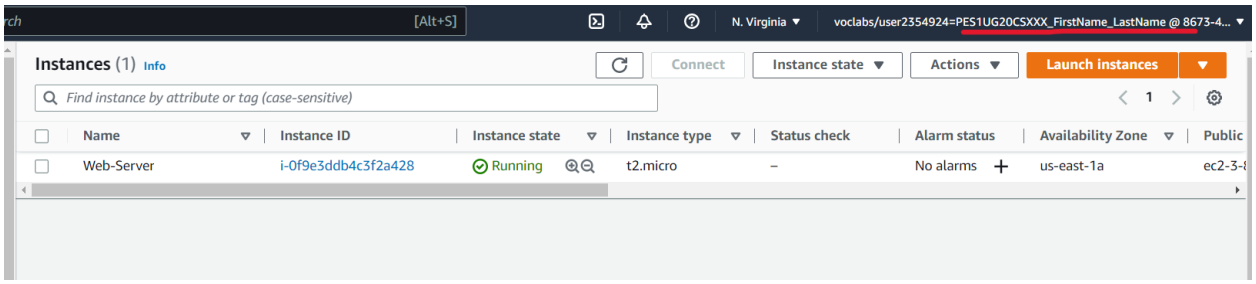
- Amazon Machine Image(AMI)
- Instance Type (The Instance Type usually depends on the use of the VM)
- Specific Instance Details such as network, subnets, start up scripts etc.
- Security Groups - These are essentially the firewalls to your instance, they control the access to your instance.

Deliverables:

The following screenshots are to be submitted:

- Summary of instance before launching (Review Instance Launch)
- EC2 instance in running state
- Web server browser with the message displaying
- Showing the instance volume resized
- EC2 instance in stopped state

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



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>_E1.pdf** (Eg. A_PES1UG20CSXXX_Name_E1.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.