**Lab - Launch an EC2 instance**

**Virtual Servers in the Cloud**

In this hands-on exercise, you will launch a virtual server in the cloud within a secure network. You will also manage additional storage options for your server.

**Prerequisites:**

* AWS Account

**Topics Covered:**

By the end of this lab, you will be able to:

* Launch a secure EC2 (Elastic Cloud Compute) instance within a VPC (Virtual Private Cloud)
* Manage an EBS volume

**Steps:**

1. **Access VPC service from AWS Management Console**
   * On the AWS Management Console page, type vpc in the Find Services box and then select VPC.
   * Click the Launch VPC Wizard button and select VPC with a Single Public Subnet. ***Important:*** In the VPC Name text box, enter a name for the VPC, and then select the first AZ from the Availability Zone dropdown. Leave everything else as the defaults.
   * Select Create VPC button.
   * You should see the VPC Successfully Created page, click the OK button in the far right. ***Important:*** You should see a table that lists all of the VPCs, make a note of the one just created.
2. **Launch an EC2 instance**
   * Navigate to the EC2 console page, by clicking on Services in the upper left-hand menu. Type EC2 in the text box and click on EC2 found in the search results.
   * On the EC2 Dashboard page, click on Instances in the left-hand navigation.
   * Click Launch Instance.
   * Select the Amazon Linux 2 AMI (HVM), SSD Volume Type Amazon Machine Image (AMI). ***Important:*** You are free to choose a different AMI, but to avoid excessive charges, pick one that says, Free Tier Eligible.
   * For the Instance Type, select the free-tier instance type of t2.micro.
   * Click on Next: Configure Instance Details.
   * Enter the 1 for the Number of Instances.
   * For Purchasing option, leave unchecked.
   * For Network, select the VPC that was created in the previous step, and then select the subnet in to which to launch the instance.
   * Keep the other default settings on this page as is.
3. **Attach an EBS volume**
   * Click on Next: Add Storage to attach an EBS volume. ***Important:*** Here we already see there is a root volume (or device) attached to your instance, this is an EBS volume. We are going to add additional storage.
   * To attach additional storage, click on Add New Volume.
   * Select Delete on Termination and keep the other default settings.
   * Click Review and Launch.
   * Click Launch Instances.
   * Generate and download a new key pair and then launch the instance. ***Important:*** This will allow you to SSH into your instance from your local machine. This is a one-time process, so generate and download the new key pair now.
   * The launch will take a couple of minutes, select View Instances during the wait.
   * Check the instance state, it should say running.

**Congratulations! You’ve launched your first virtual server in the cloud.**

1. **Cleanup & Disable EC2 Instance** To avoid recurring charges for leaving an instance running, let’s disable the EC2 instance and terminate the VPC
   * From the EC2 Dashboard, select the instance just created, click Actions, then Instance State, and then select Terminate.
   * From the VPC Dashboard, select the VPC just created, click Actions, then Delete VPC.