## Try it out objective

Use this hands-on to get started with EC2. You'll learn how to launch, connect to, and use a Linux instance. An instance is a virtual server/machine (VM) in the AWS Cloud running a specific operating system and can be used to host applications and databases.

The goal

The following are the goals of this hands-on:

1.   Understand the process of launching an instance

2.   Using a custom AMI with a web server installed

3.   Access the site from a browser

4.   Connect to the instance via SSH (optional for non technical learners)

5.   Terminate an instance
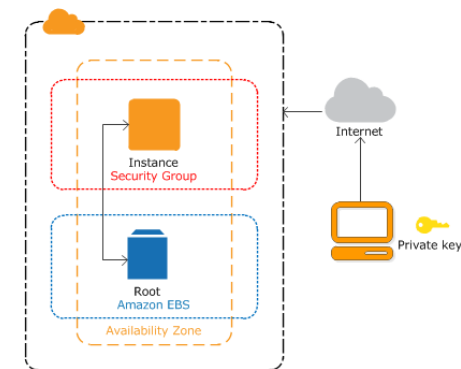
Please note if a field (short for text field/text area/checkbox/radio/dropdown/list or any other UI element) is not specified in the following steps, it means the default value of the field set by AWS needs to be used. No change is needed for those fields as part of this hands-on.

A. Hands-On: Launch an instance

1.   This lab can be performed in your AWS Academy account or in your personal AWS account.

2.   If you wish to use AWS Academy for this exercise, sign in to your Academy account, start the lab and access the AWS Management Console before proceeding. The AWS Academy sign-up link is https://awsacademy.instructure.com/login/canvas. (Skip this step if you are using your personal AWS account)

3.   Open the EC2 management console at https://console.aws.amazon.com/ec2/ (you will be required to sign in)

4.   Change the region to **N Virginia** (if it is not already selected). The region dropdown is located at the top right of the EC2 management console.

5.   From the EC2 management console, click on **Launch Instance** (ignore the template option).

6.   Enter the following value in the "Name" field

```
httpserver1
```

7.   The **Application and OS Images (Amazon Machine Image)** page displays a list of basic configurations, called Amazon Machine Images (AMIs), that serve as templates for your instance. In the search bar, paste the following and press the Enter key.

```
ami-0d4ea279515a4aa07
```

8.   Navigate to the Community AMIs tab to find the AMI named "**PGPCC TIO-1**". Press the Select button next to the AMI to select the image,

9.   In the Key pair(login) section, select Create new key pair and enter the following value in the text field for Key pair name. No other field change is needed.

```
pgpcc-key1
```

Click on **Create key pair** button

10. In the Network Settings section, click on Edit and make the following changes -

   a)   In the Network dropdown, ensure the default vpc is selected

   b)   Change the Subnet to us-east-1a in the dropdown

   c)   Ensure Auto-assign public IP is Enabled

   d)   In the Firewall (security groups), select "Create security group" radio button

   e)   Enter the Security group name as given below

   > tio1-sg

   f)   Paste the value of the Description field from below (remove any existing value from this field)

   > Opens security groups for ssh and http

   g)   A rule for SSH is already added, change the Source dropdown to Anywhere

   h)   Click on the Add Security Group Rule button to add the second rule for this security group

   i)   Click the Type dropdown of this row (not the earlier SSH row) and select HTTP, change the Source dropdown to Anywhere

11. The rest of the fields can be left to their default values

12. On the right side of the page,in the Summary section, ensure that the field Number of instances is set to 1 and click on Launch Instance

13. In the Launch Status confirmation page click on the View all Instances button on the right side bottom of the page

14. Click on the Checkbox to the left of the httpserver1 displayed in the Instances table

15.   The bottom of the screen shows the instance attributes and the Details tab is visible by default (do not change it)

16.   Locate the display item "Public IPv4 address" and copy the public IP address (do not click on the open address link, it defaults to https and the page will not work). Save this public IP address (does not start with 172.31.x.x) in a text editor or write it down on a piece of paper if you wish to do the SSH exercise.

17.   Open a new browser tab, paste the public IP address and hit enter. The http page will be visible.

B. Hands-On: Terminating/deleting an instance

This exercise is mandatory for all learners.

1.   Go back to the browser tab EC2 management console

2.   Click on **Instances** in the left navigation

3.   Click on the **Checkbox** to the left of the **httpserver1** displayed in the **Instances** table (no action is necessary if the checkbox is already selected)

4.   Click on the **Instance state** dropdown towards the top right side of the screen

5.   Select **Terminate instance** option

6.   Click on the **Terminate** button on the confirmation popup window

7.   The instance will show in **Shutting down** status and a few moments later will show as **Terminated**

8.   **Terminated instances** do not attract any costs and will be **auto removed** from the instance listing in about **2 hours** (or less)