Linux Academy

Hands-On Training

Configuring an EC2 Web Hosting Instance

Introduction

In this lab, we will be applying basic concepts covered in the EC2 portion of the AWS Certified Solutions Architect, Associate Level course. We recommend that you review these videos before trying the lab. This lab will also include a brief introduction to Amazon Route 53.

Goals

By the end of the lab, you will have:

- Created a t1.micro EC2 image with Ubuntu 14.04 LTS as the distribution
- Connected to the instance using your .pem key (created during lab)
- Downloaded Apache2
- Allocated and assigned a new Elastic IP address to your EC2 instance
- Used Route 53 to direct linuxacademylab#.com to your Elastic IP
- Tested your instance by visiting the website

Domain Name

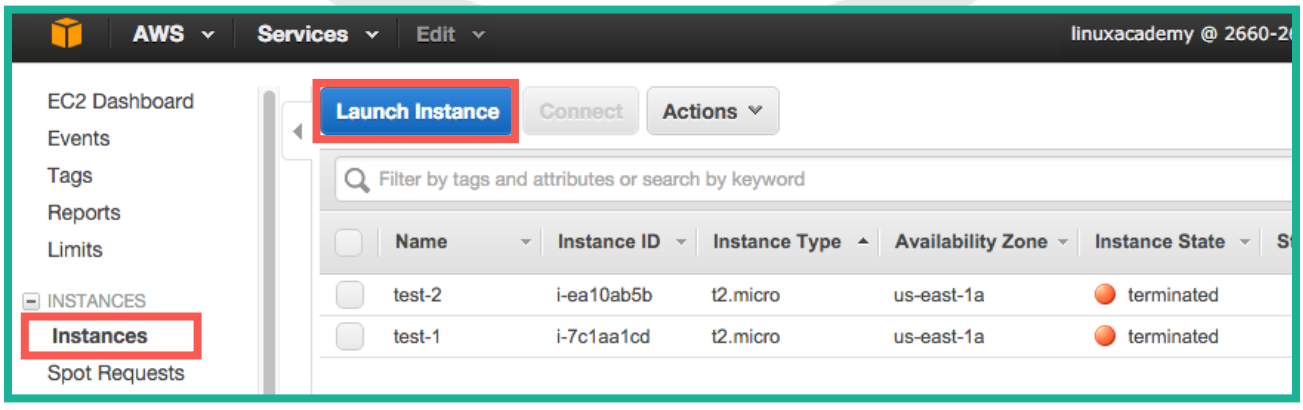
Your lab will include a domain name automatically located in Route 53. The domain name will be *linuxacademylab#.com*, where the pound (#) sign denotes a number (linuxacademylab1.com, linuxacademylab2.com, etc.).

Getting Started

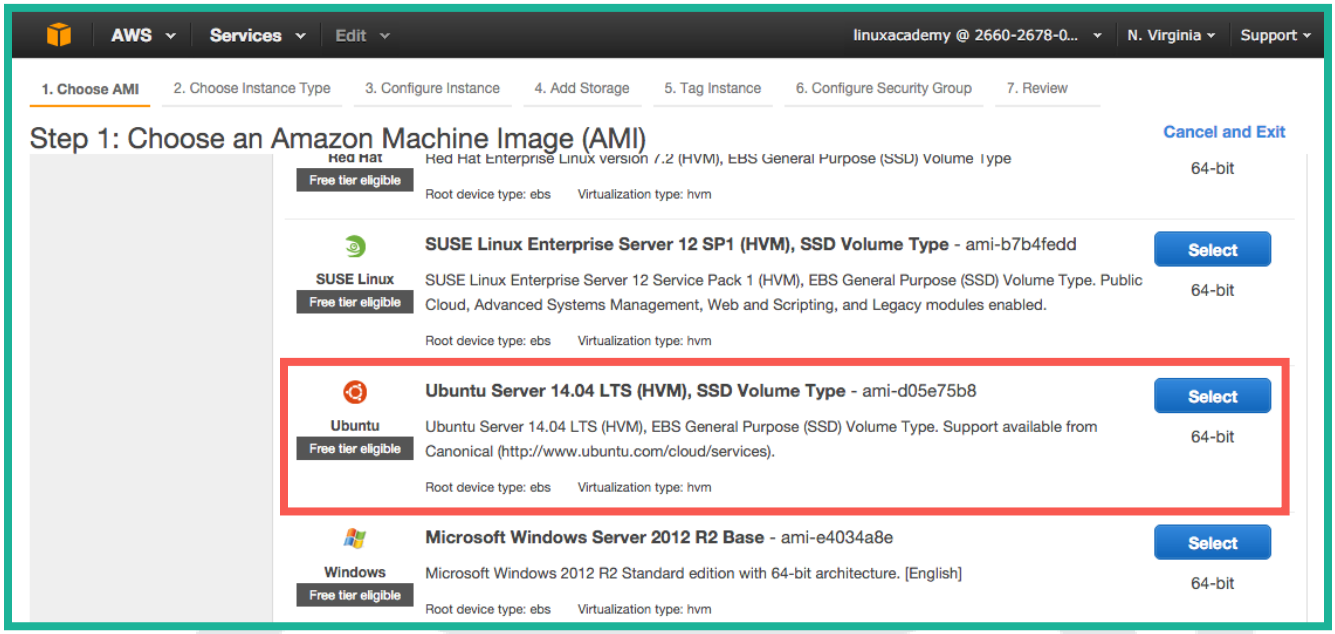
Open your AWS console by using the link provided on the LiveLab page. Your login credentials are also included on this page. From here, select the **EC2** dashboard, under **Compute**.

Creating and Launching an Amazon EC2 Image

From the **EC2 dashboard**, select **Launch Instance**. This can be done from the **Instances** page (linked on the left menu), or from the EC2 landing page itself.

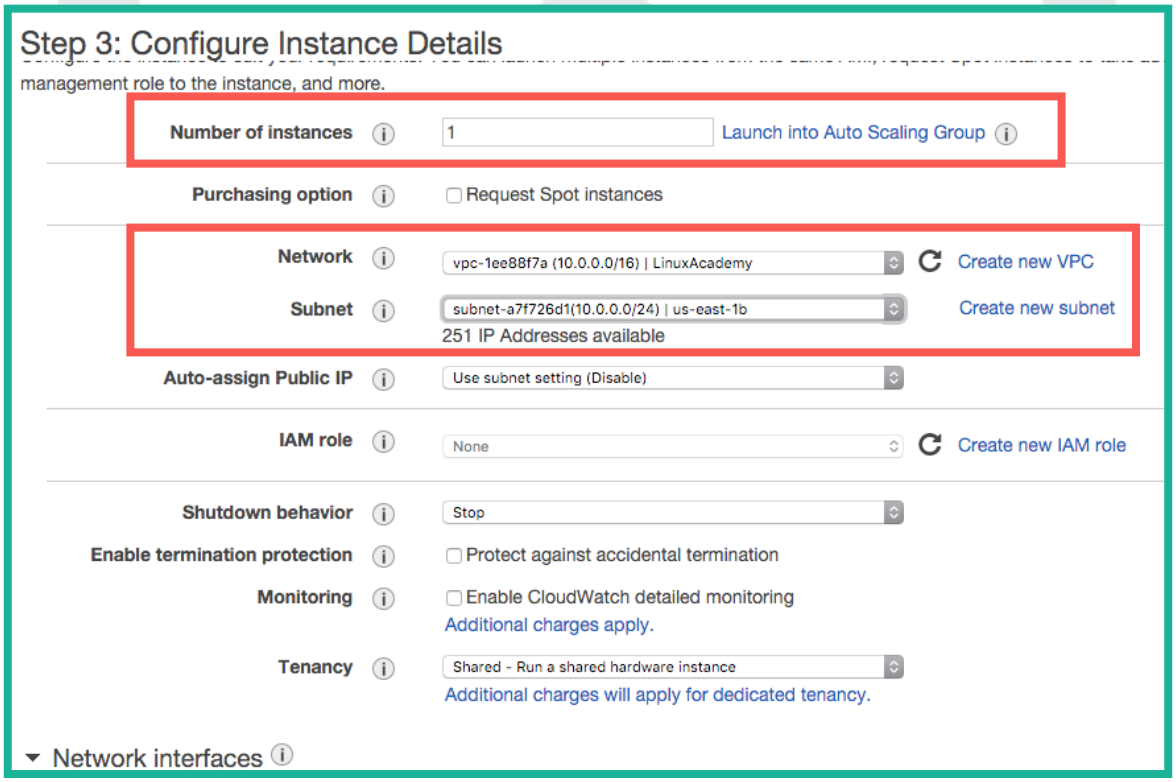


You will be asked to **Choose an Amazon Machine Image (AMI)**. In this LiveLab, we will be using the *Ubuntu Server 14.04 LTS*. If you are more familiar with another Linux distribution, feel free to use that, if available. Be aware you may have to adapt terminal input accordingly.



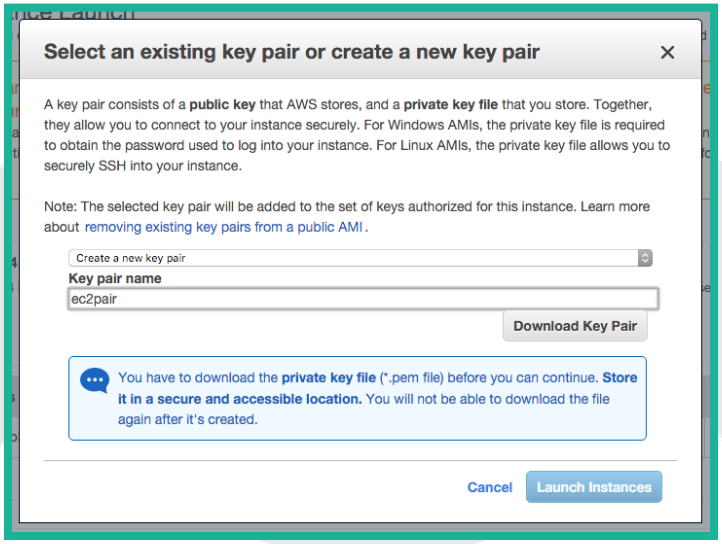
Select the default instance type: *t2.micro*. Press **Next: Configure Instance Details**.

Set the **Number of instances** to *1*. Select the **Network** ending in */ Linux Academy* from the dropdown menu. Any available **Subnet** is acceptable. All other settings can be left at the default. Press **Next: Add Storage**. This, too, can be left using the default. Go to **Next: Tag Instance**. Add a **Value** of *WebHostingInstance*. Click **Next: Configure Security Group**.



Select the **Select an existing security group** radio button. There will be a security group containing your Linux Academy username. Select this group and press **Review and Launch**. Review your choices, and then **Launch**.

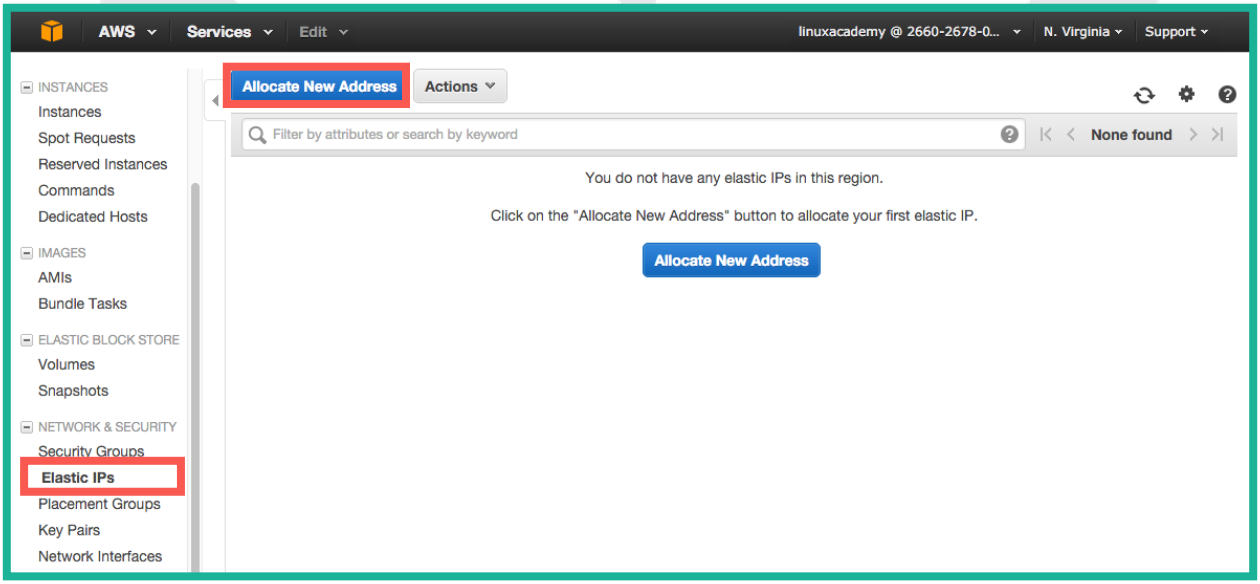
You will be asked to create a new key pair. Select **Create a new key pair** from the dropdown, and give your keypair a name. For this example, we will be naming it *ec2pair*. **Download Key Pair**, then **Launch Instance**. Press **View Instance** to go back to the EC2 dashboard.



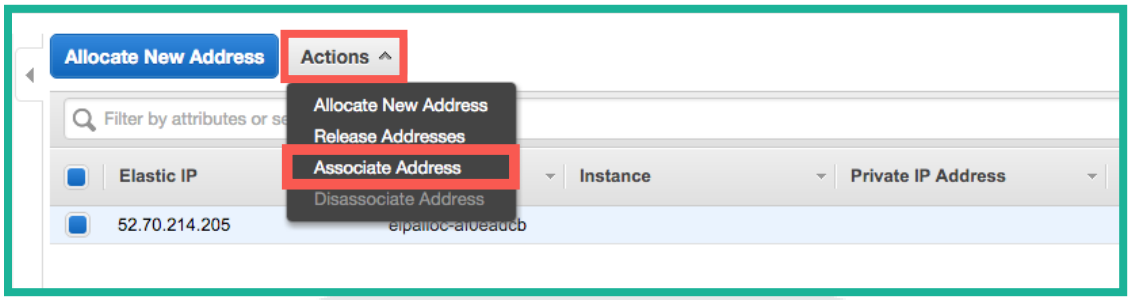
Allocating and Assigning an Elastic IP Address

Since we are using Route 53 to point our domain to our IP address, we can allocate an Elastic IP address to our instance.

From the left menu, under **Network & Security**, go to **Elastic IPs**. None will be available, so press **Allocate New Address**, then **Yes, Allocate**. A pop-up will inform you of your given IP address, make note of this address to be used later. Close the pop up when you are finished reviewing it.



With your new IP selected, choose **Associate Address** from the **Actions** menu. Here you can use the **Instance** text area to search for your *WebHostingInstance*, and select it. Press **Associate**.



Configuring Your Domain with Route 53

Now that an IP address is available, we need to associate it with our domain.

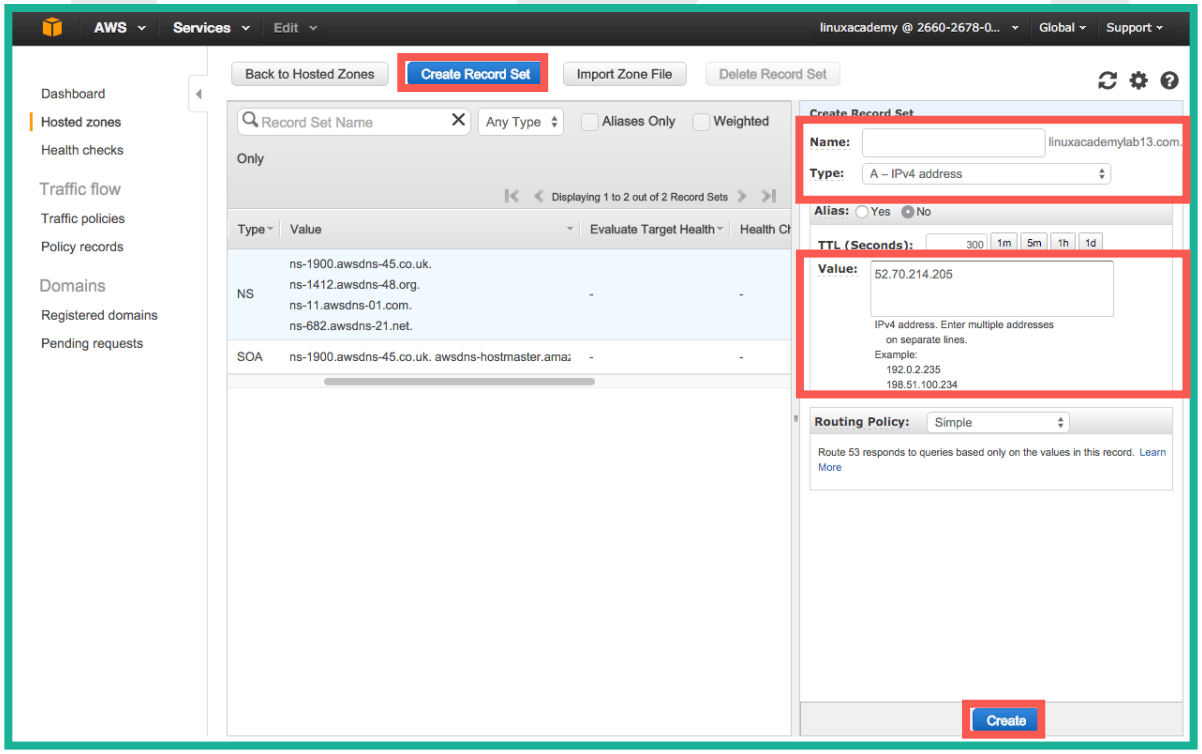
Note

You may be informed that you do not have sufficient permissions to execute Route 53 actions. Disregard this warning, your permissions are appropriate for the level of work we will need to do.

From the **Services** tab, select **Route 53** (under **Networking**).

Within the **Hosted Zones** area, you will see a **Domain Name** titled *linuxacademylab#.com*, with the # replaced with the number you were assigned for this LiveLab.

Select your zone, and click on **Go to Record Sets**. We want to point linuxacademylab#.com to your newly-created WebHostingInstance. Press **Create Record Set**.



Leave the initial **Name** field blank, and make sure the **Type** is *A - IPv4 address*. The **Value** should be the *Elastic IP address that we just created*. Press **Create**, then repeat the above Route 53 steps, this time replacing the **Name** field with *www*.

This will now direct all traffic going to *www.linuxacademy#.com* and *linuxacademy#.com* to your Elastic IP address, and therefor your instance.

Connecting to Your EC2 Instance, Installing Apache

Back in the **EC2 Instances** dashboard, click on your instance and press **Connect**, above. Open your terminal. From the location of your downloaded private key, change the permissions, so it is not publicly viewable:

```
chmod 400 ec2pair.pem
```

You can now connect with the provided ssh text. For example:

```
ssh -i "ec2pair.pem" ubuntu@52.71.55.177
```

Your log in information will resemble this.

Before we can install Apache, we should update our server:

```
sudo apt-get update
```

NOTE: If you have opted to use a server other than Ubuntu, your download package manager may be different.

Install Apache:

```
sudo apt-get -y install apache2
```

The `-y` tag notes that the terminal should answer yes to all yes-or-no questions provide during the install process.

To see if the installation has been successful, navigate to your linuxacademylab#.com website, and see if the default Apache page is there. If yes, you have completed this exercise.