Week 1 – Lab 2 Instructions

DON'Ts

- **Don't click 'END LAB' on qwiklabs for your AWS Educate Starter Account 75**
- **Don't click 'sign out' of your aws account**
- **Don't leave your instances running after finishing the lab**

Since you have already seen the demo with an EC2 Windows instance, we will be using and EC2 Linux instance for the lab.

Go to your aws console (via qwiklabs via awseducate)

Select EC2 to connect to EC2 management console

Click "Launch Instance"

1. Choose an AMI – Amazon Linux AMI (64 bit)
2. Choose Instance Type – General purpose t2.micro
3. Configure Instance Details – Defaults are fine
4. Add Storage – Defaults are fine
5. Tag Instance – Name: lab2-<username>
6. Configure Security Group – Defaults are fine
7. Review Instance Launch – Review and "Launch"

Pop up will appear asking you to "Select an existing key pair or create a new key pair"

- Select option to Create a new key pair, name it lab2-<username> (for me it will be lab2-banjum)
- Click "Download Key Pair", it will download the file lab2-<username>.pem for you.

Click "Launch Instances". You will be redirected to a "Launch Status" page. Scroll down and click "View Instances".

You will see your instance spinning up in the EC2 Management Console. Wait till the "Instance State" is running and the "Status Checks" complete and show 2/2.

Let's now try to connect to your instance via SSH.

Windows Users: Connecting to your Amazon EC2 Instance via SSH

In this section, you will use the PuTTY Secure Shell (SSH) client and your server's public DNS address to connect to your server.

All Amazon EC2 instances are assigned two IP addresses at launch: a *private IP address* (RFC 1918) and a *public IP address* that are directly mapped to each other through Network Address Translation (NAT). Private IP addresses are only reachable from within the Amazon EC2 network. Public addresses are reachable from the Internet.

Amazon EC2 also provides an *internal DNS name* and a *public DNS name* that map to the private and public IP addresses, respectively. The internal DNS name can only be resolved within Amazon EC2. The public DNS name resolves to the public IP address outside the Amazon EC2 network and to the private IP address within the Amazon EC2 network.

Retrieve your host's public DNS address

- In your list of running Amazon EC2 instances, select the instance to display the instance details.
- Copy the **Public DNS** value to your Clipboard. It will look something like: *ec2-54-84-236-205.compute-1.amazonaws.com*.

You should already have downloaded your Amazon EC2 key pair private key file (.pem) before launching your instance. We will need to convert into PuTTY-compatible PPK format. This can be done using puTTYgen.

1. Run puTTYgen
2. Load the pem file (you will need to change the extensions to All Files to locate the file)
3. Click "Save private key", it will store the key in puTTY-compatible PPK format (.ppk).

Connect to the Amazon EC2 instance using SSH and PuTTY

- Download and open PuTTY.exe
- In the **Host Name** box, enter **ec2-user@***<public DNS>*. Paste the public DNS value from your Clipboard.
- In the **Connection** list, expand **SSH**.
- Click **Auth** (don't expand it).
- In the **Private key file for authentication** box, browse to the PPK file that you downloaded and double-click it.
- Click **Open**.
- Click **Yes** when prompted to allow a first connection to this remote SSH server.

Note: Because you are using a key pair for authentication, you will not be prompted for a password.

Common issues

If PuTTY fails to connect to your Amazon EC2 instance, verify that:

- You entered **ec2-user@***<public DNS>* in PuTTY.
- You downloaded the PPK file for this lab from qwikLABS.
- You are using the downloaded PPK file in PuTTY.
- The network you are on allows for outbound TCP connections to destination port 22.

OSX and Linux Users: Connecting to your Amazon EC2 Instance via SSH

You should already have downloaded your Amazon EC2 key pair private key file (.pem) before launching your instance.

- Open the Terminal application.
- Enter the following commands.

Substitute the path/filename for the PEM file you downloaded, and paste the public DNS value from your Clipboard.

chmod 600 <path-to-pem>

ssh -i <path-to-pem> ec2-user@<public DNS>

When you see a terminal screen and Linux command line prompt, it means that you are connected to your Amazon EC2 instance! If you know any Linux commands, feel free to explore!

Answer the relevant questions on the Lab 2 worksheet.

"Terminate" your launched Instance once you are done