Week 3 – Lab 1 Instructions

PRE-STEP

Following the instructions provided for Lab 2, create an EC 2 instance (with a new key pair).

WHAT IS AMAZON EBS?

Amazon Elastic Block Store (Amazon EBS) provides persistent block level storage volumes for use with Amazon EC2 instances in the AWS Cloud. Each Amazon EBS volume is automatically replicated within its Availability Zone to protect you from component failure, offering high availability and durability. Amazon EBS volumes offer the consistent and low-latency performance needed to run your workloads. With Amazon EBS, you can scale your usage up or down within minutes – all while paying a low price for only what you provision.

CREATING AN ELASTIC BLOCK STORE VOLUME

To get started creating your first Amazon EBS Volume, you will need to access the Amazon EC2 icon on the Amazon Management Console, and then utilize the Volumes Management Panel. EBS volumes are like hard drives in a computer. The data on them persists through the lifetime of the volume and can be transported between virtual machines as needed.

1. In the **AWS Management Console,** on the **Services** menu, click **EC2.**
2. In the navigation pane, click **Volumes.**

Here you will see a volume already in use. If you do not, please wait a moment and click the refresh icon (circular arrows icon) located in the upper right corner of the window. This volume exists for a server that you have created in the pre-step.

Take note of the Availability Zone that the volume exists in, shown in **Availability Zone** column for your Amazon EC2 instance. It will be similar to "*us-west-2a*".

1. Click **Create Volume**.
2. In the **Create Volume** dialog box, select the following:

a. **Type**: Magnetic
b. **Size (GB)** : 10
c. **Availability Zone**: (match this from the zone noted in the previous step)

3. Click **Create**.

Congratulations! You have a new volume ready to be attached to an instance. Continue on to add that volume to your instance and manipulate the volume.

ADDING AN EBS VOLUME TO AN INSTANCE

You should now see two volumes in the **EC2 ELASTIC BLOCK STORE Volumes** screen.

1. If your newly created volume still shows the **State** is *creating*, click the refresh icon, located in the upper-right corner of the window.
2. When the **State** column for your new volume says *available*, select the checkbox to the left of your new volume.
3. In the **Actions** drop-down list, click **Attach Volume**.
4. Click the **Instance** field and select the running instance.
5. In the **Device** box, ensure that the assigned device mapping for drive is /dev/sdf
6. Click **Attach.**

You have now connected an EBS volume to an instance.

CREATE AND CONFIGURFE YOUR FILE SYSTEM

Connect to your EC2 instance via SSH following the instructions provided in Lab 2 handout.

In this section, you will add an additional 1 GB of storage to a Linux instance as an ext3 file system under the /mnt/data-store mount point. Note that, depending on the type of Linux distribution, your volume may be shown under a slightly different device name, such as /dev/xvdf instead of /dev/sdf.

Answer Q1 on lab handout

Issue the following command to create an ext3 file system on the new volume:

```
sudo mkfs -t ext3 /dev/sdf
```

Create the directory for mounting the new storage:

```
sudo mkdir /mnt/data-store
```

Mount the new volume:

```
sudo mount /dev/sdf /mnt/data-store
```

Answer Q2 on lab handout

To configure the Linux instance to mount this volume on boot, you need to add a line to /etc/fstab.

In your SSH session window, type the following command:

```
sudo nano /etc/fstab
```

Using your arrow keys, move your cursor to the blank line underneath the existing content displayed in the session window.

Type the follow command:

```
/dev/sdf /mnt/data-store ext3 defaults,noatime 1 2
```

Type CTRL+O, ENTER to save /etc/fstb.

Type CTRL+X to exit nano.

Answer Q3 on lab handout

Disconnect from your EC2 Instance. Terminate your instance and delete the 10GB drive that you created.