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ACF Lab 4:

Working with EBS

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COS 20019- Cloud Computing Architecture

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5/6/2023

Screenshotted below is all the step I spent to finished ACF Lab 4, belong with detail explanation.

**Task 1: Create a New EBS Volume.**

Choose **Create volume** then configure:

* Volume Type: General Purpose SSD (gp2)
* Size (GiB): 1.
* Availability Zone: Select the same availability zone as your EC2 instance.
* Choose Add Tag
* In the Tag Editor, enter:
  + Key: Name
  + Value: My Volume

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**Task 2: Attach the Volume to an Instance**

* Select **My Volume.**
* In the **Actions** menu, choose **Attach volume.**

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* Choose the **Instance** field, then select the instance that appears (Lab).
* Note that the **Device** field is set to /dev/sdf.

Screens screenshot of a computer

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**Task 3: Connect to Your Amazon EC2 Instance**

Choose the Details drop down menu, and then choose Show.

Choose the Download PPK button and save the labsuser.ppk file.

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Configure PuTTY to not timeout:

* Choose **Connection**
* Set **Seconds between keepalives** to 30

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Configure your PuTTY session:

* Choose **Session**
* **Host Name (or IP address):** Paste the Public DNS or IPv4 address

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* Choose **Auth** and expand **Credentials**
* Under **Private key file for authentication**: Choose **Browse**
* Browse to the labsuser.ppk

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When prompted **login as**, enter: ec2-user

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**Task 4: Create and Configure your file system**

**df -h** to view the storage available on instance.

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* Create an ext3 file system on the new volume:
  + sudo mkfs -t ext3 /dev/sdf
* Create a directory for mounting the new storage volume:
  + sudo mkdir /mnt/data-store
* Mount the new volume:
  + sudo mount /dev/sdf /mnt/data-store
* To configure the Linux instance to mount this volume whenever the instance is started, I need to add a line to /etc/fstab.
  + echo "/dev/sdf /mnt/data-store ext3 defaults,noatime 1 2" | sudo tee -a /etc/fstab

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* On your mounted volume, create a file and add some text to it.
  + sudo sh -c "echo some text has been written > /mnt/data-store/file.txt"
* Verify that the text has been written to your volume.
  + cat /mnt/data-store/file.txt

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**Task 5: Create an Amaxon EBS Snapshot**

In the AWS Management Console, choose Volumes and select My Volume.

In the Actions menu, select Create snapshot. A screenshot of a computer

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* Choose **Add tag** then configure:
  + **Key**: Name
  + **Value**: My Snapshot
  + Choose **Create snapshot**

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* Delete the file that you created on your volume in SSH.
* sudo rm /mnt/data-store/file.txt
* Verify that the file has been deleted.
* ls /mnt/data-store/

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**Task 6: Restore the Amazon EBS Snapshot**

Create a Volume Using Your Snapshot

* Choose Add tag then configure:
* **Key**: Name
* **Value**: Restored Volume
* Choose **Create volume**

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**Attach the Restored Volume to Your EC2 Instance.**

* In the left navigation pane, choose **Volumes**.
* Select **Restored Volume**
* In the **Actions** menu, select **Attach volume.**

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**Mount the Restored Volume**

* Create a directory for mounting the new storage volume:
  + sudo mkdir /mnt/data-store
* Mount the new volume:
  + sudo mount /dev/sdg /mnt/data-store2
* Verify that volume mounted has the file that you created earlier.
  + ls /mnt/data-store2/

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