Lab: Configuring AWS CLI and Launching an EC2 Instance

Objectives:

1. Install and configure the AWS CLI.
2. Create an AWS CLI profile.
3. Launch an EC2 instance using the AWS CLI.

Prerequisites:

- An AWS account.
- AWS CLI installed on your local machine.
- Appropriate permissions to create EC2 instances in your AWS account.

Step 1: Install the AWS CLI

1. **Open your terminal.**
2. **Install the AWS CLI:**

```
sudo apt-get update
sudo apt-get install awscli
```

3. **Verify the installation:**

```
aws --version
```

Step 2: Configure the AWS CLI

1. **Run the AWS configuration command:**

```
aws configure
```

2. **Provide your AWS credentials:**
    - **AWS Access Key ID**: Enter your access key.
    - **AWS Secret Access Key**: Enter your secret key.
    - **Default region name**: Enter your preferred region (e.g., us-east-1).
    - **Default output format**: Enter your preferred output format (e.g., json).
3. **You can also create a named profile by running:**

```
aws configure --profile myprofile
```

Replace myprofile with your desired profile name and repeat the prompts.

Step 3: Launch an EC2 Instance

1. **Choose an Amazon Machine Image (AMI):** You can find available AMIs by running:

```
aws ec2 describe-images --owners amazon --query
"Images[*].[ImageId,Name]" --output table
```

Note down the AMI ID of the desired image (e.g., ami-12345678).

2. **Choose an instance type:** Common types include t2.micro, which is eligible for the free tier.
3. **Launch the EC2 instance:** Replace ami-12345678 with your chosen AMI ID and mykeypair with your key pair name.

```
aws ec2 run-instances --image-id ami-12345678 --count 1 --instance-
type t2.micro --key-name mykeypair --profile myprofile
```

4. **Verify the instance is running:** Use the following command to check the status of your instances:

```
aws ec2 describe-instances --profile myprofile --query
"Reservations[*].Instances[*].[InstanceId,State.Name]" --output table
```

Step 4: Access the EC2 Instance

1. **Obtain the public IP address:** Run the following command to get the public IP address:

```
aws ec2 describe-instances --profile myprofile --query
"Reservations[*].Instances[*].[PublicIpAddress]" --output table
```

2. **SSH into the instance:** Use the public IP address to connect to your EC2 instance:

```
ssh -i /path/to/mykeypair.pem ec2-user@<public-ip-address>
```

Replace /path/to/mykeypair.pem with the path to your key pair file and <public-ip-address> with the actual public IP.

Step 5: Terminate the EC2 Instance

1. **To avoid incurring charges, terminate the instance when done:** Replace <instance-id> with your instance ID.

```
aws ec2 terminate-instances --instance-ids <instance-id> --profile
myprofile
```

2. **Verify the instance is terminated:**

```
aws ec2 describe-instances --profile myprofile --query
"Reservations[*].Instances[*].[InstanceId,State.Name]" --output table
```

Conclusion

You have successfully configured the AWS CLI, created a profile, and launched an EC2 instance. Remember to terminate your instance to avoid unnecessary charges, and feel free to explore further options available with the AWS CLI!

Submission: Run a CLI command to see if you have any running instances. Take a screenshot of the result and submit. Make sure all screenshots are of your entire screen.

Note: Please create an AWS free tier account is you do not already have one.