Lab 5 – Lambda Functions and VPCs

Review the EC2 Instance

1. Log into the AWS console and verify that the N. Virginia region is selected
2. In the services search text box, type in **EC2**
3. Click **EC2**
4. Click **Instances**
5. Select the Snaptest instance
    a. Copy the **IPv4 Private IP** and paste it to a text editor like Notepad for later use.

Create a Lambda Function to Ping the EC2 Instance

6. In the services search text box, type in **Lambda**
7. Click **Lambda**
8. Click **Dashboard**
9. Click **Functions**
10. Click **Create Function**
    a. Select Author from scratch
    b. Function name: PingTest
    c. Runtime: Python 3.12
    d. Click **Create function**
11. Scroll down and view the auto-populated code.
12. Replace the code with the following text. Substitute YOURIPHERE for the private IPv4 address of your EC2 instance:
    NOTE: Make sure that when you paste in the code, it is properly indenting the lines as shown below

```
#import json
import urllib3

print('Loading function')
def lambda_handler(event, context):
    http = urllib3.PoolManager()
    resp = http.request("GET", "http://YOURIPHERE")
    print(resp.data)
```

13. Deploy the code.
14. Create a new test event and invoke the Lambda function.
15. View the execution results.

16. The output for the function should time out.

    Your Lambda function is attempting to access this IP address over the Internet.
    This is a private IP address within a VPC.
    In order to access it from Lambda, we must give the Lambda function an ENI inside the VPC.

Create a Lambda Function Inside the VPC

17. In the services search text box, type in **Lambda**
18. Click **Lambda**
19. Click **Dashboard**
20. Click **Functions**
21. Click **Create Function**
    a. Select Author from scratch
    b. Function name: PingTestinVPC
    c. Runtime: Python 3.12
    d. Advanced settings:
        i. Select Enable VPC
        ii. Choose the default VPC
        iii. Subnets: Select al subnets
        iv. Security Group: Default

            Note – this must be the same security group that was configured for your EC2 instance.
    e. Click **Create function**
    f. Once the Lambda function is created, copy the function ARN (on the right) and paste it into a text editor like notepad for later use.
    g. It should look similar to this:
    arn:aws:lambda:us-east-1:481160541762:function:PingTest
22. Scroll down and view the auto-populated code.
23. Replace the code with the following text. Substitute YOURIPHERE for the private IPv4 address of your EC2 instance:

NOTE: Make sure that when you paste in the code, it is properly indenting the lines as shown below

```
#import json
import urllib3

print('Loading function')
def lambda_handler(event, context):
    http = urllib3.PoolManager()
    resp = http.request("GET", "http://YOURIPHERE")
    print(resp.data)
```

24. Deploy the code.
25. Create a new test event and invoke the Lambda function.
26. View the execution results.
27. The output for the function should indicate that the website is reachable.