EC2 lab

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September 21, 2022

1 Check your setup

Before starting, open PowerShell/Bash and run:

```
# change to where you've cloned the folder
cd ~/Desktop/cloud_foundations

# run the lab checks script:
./lab_checks.ps1
# fix any issues identified before continuing

# then change to the ec2 topic folder
cd *_ec2
```

2 VPC creation

2.1 Check script

After each step you should run the check script and confirm that the step has been done correctly.

```
./check_lab_vpc.ps1
```

2.2 Creation steps

1. Create the VPC named `LAB_VPC` with IP range 10.0.0.0/16.
2. Create the Subnet named `LAB_SUBNET_1` with: [6

   IP range 10.0.1.0/24

   automatic public IP assignment turned on
3. Create the Internet Gateway named `LAB_GATEWAY`.
4. Attach the Internet Gateway to the VPC.
5. Find the route table for the VPC. Add a route to send traffic for anywhere (0.0.0.0/0) to your internet gateway.

6. Create the Security Group named `LAB_SG` with description `LAB_SG`.
7. Add a rule to your security group permit SSH traffic (TCP port 22) inbound from anywhere on the internet (0.0.0.0/0).

3 EC2 instance

Create EC2 instance as follows:

1. Open the instances page by browsing to Services, EC2, instances.
2. Hit Launch Instances.
3. Name the instance `LAB_INSTANCE`.
4. Pick Amazon Linux from the AMI list.
5. Check that instance type is `t2.micro` (should be default)
6. Under Key Pair drop down to `MAIN_KEY`.
7. On Network Settings hit Edit. Choose your `LAB_VPC` from the list.
8. Ensure that your `LAB_SUBNET_1` is selected.
9. Ensure that Auto-assign public IP is set to Enable.
10. Choose Select existing security group.
11. From the list pick `LAB_SG`.
12. Hit Launch Instance in the bottom right.
13. Click the Instances link and notice that your instance will be Pending before changing to Running.

4 SSH to your instance

1. Click into your instance in the list.
2. Click the copy button beside Public IPv4 address.
3. In PowerShell/Bash type:

```
ssh ec2-user@<Public IP here>
# example:
ssh ec2-user@3.251.82.154
```

4. The first time you connect to a host you'll get a warning:

```
The authenticity of host '54.78.220.233 (54.78.220.233)' can't be established.
ECDSA key fingerprint is SHA256:8omkD5RLibZNgJJ/B7MAnL7IbEcrmCmIWFdQXbjJf60.
Are you sure you want to continue connecting (yes/no)?
```

   Just type `yes` here.

5. If you see something like the following then you're connected:

```
       __|  __|_  )
       _|  (     /   Amazon Linux 2 AMI
      ___|\___|___|
```

5 Cleanup

Delete all resources you made in this lab:

1. Terminate the instance.
2. Delete the VPC.