WILEY

Lab Setup [AWS]

Assignment

Step 1 (Create an AWS Free Tier Account)

1. Create an AWS Free tier account, if not already present.

Link(s):

1. **AWS Free Tier:** *https://aws.amazon.com/free/*

Step 2 (Create an EC2 instance)

1. Login to AWS console at *https://console.aws.amazon.com/*
2. Go to EC2 Dashboard
3. Click on Launch Instance → Launch Instance
4. Select first AMI *(Amazon Linux 2 AMI (HVM))*
5. Select instance type as either "*t2.micro*" or "*t3.micro*"
6. Leave everything as default on next page (Configure instance)
7. Leave default values for Storage options.
8. Add the following tag(s):
    - Key – Name
    - Value – centos-node
9. On the next create a new Security Group with ports 80, 443 and 22 open for incoming traffic.
10. Click → "Review and Launch" → Launch
11. Create a new key pair and make sure you have the Private key downloaded on your laptop. Keep it safe for future use.
12. Click → Launch Instances
13. Check on the Dashboard (refresh, if needed) after ~2 minutes. You should be able to see a new EC2 instance in "*running*" state.

Step 3 (SSH into the newly created EC2 instance)

You can connect to the newly created instance using one of the following ways:

1. EC2 instance connect – Provides connectivity to the instance using a browser based terminal connectivity. This is the easiest way to connect.
2. Session Manager – Needs SSM agent to be installed on your instance. Most secure way as this method does not need SSH key pair to connect.
3. SSH Client – Use a standard ssh client (terminal, putty etc.) and ssh command. For example:

Syntax:

```
ssh -i "/path/to/publickey" username@fqdn
```

Example:

```
ssh -i "sk-us-east1.pem" ec2-user@ec2-3-93-15-92.compute-1.amazonaws.com
```

Note(s): For most of our lab exercises we would use either the 1st or the 3rd method as method 2 requires additional configuration for Systems Manager to be used.

Step 4 (Create a 3–Node Cluster on AWS)

If you plan to use AWS as your primary lab environment, then create 2 additional EC2 instances with following details:

- AMI – Either AWS Linux or Ubuntu based AMIs from Community
- Instance Type – t2.micro or t3.micro
- Security Group – Use same SG created in step 2 for all EC2 instances.

Note(s): Be careful when you launch multiple instances in AWS. AWS free tier has certain limits which you need to be aware of. If you are not careful, you might incur unnecessary charges in your account.

Step 5 (Optional) Additional Challenge

- Setup Password-less Authentication between all nodes.