DEVOPS MASTERCLASS

WEEK 3 – TWO TIER INFRASTRUCTURE SETUP

Task Outline

Create a 2 Tier infrastructure as shown in the diagram below

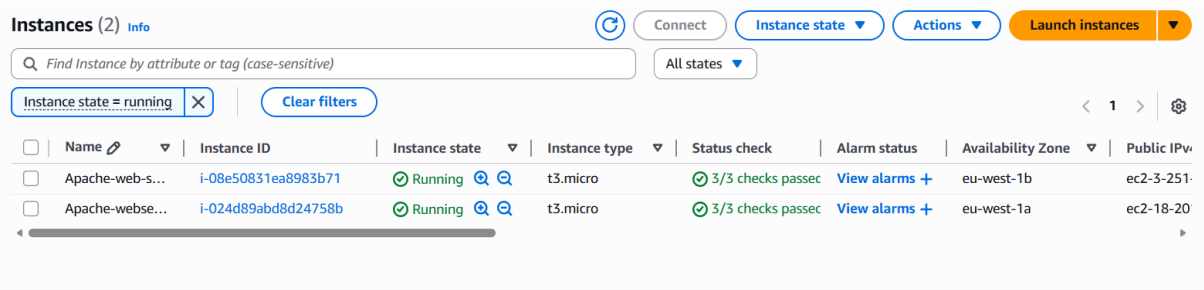
- A frontend /Tier 1 system running HTTPD (or Apache Web Server)
- A backend /Tier2 system running Python 3 and Java 11 (or Java 17)

Key Info

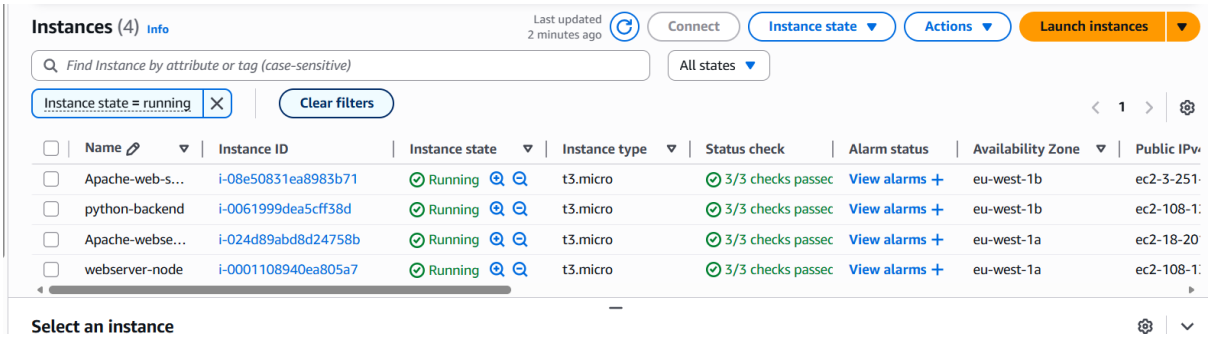
1. Each tier should run two nodes – in different AZ for redundancy.
2. Ensure you have a template to expedite VM creation.
3. Create a repository in GitHub to store scripts used for nodes.

EC2 Instances

Tier 1- Presentation Layer – HTTPD



Tier 2- Application Layer / Logic/ Backend – Python 3/ Java



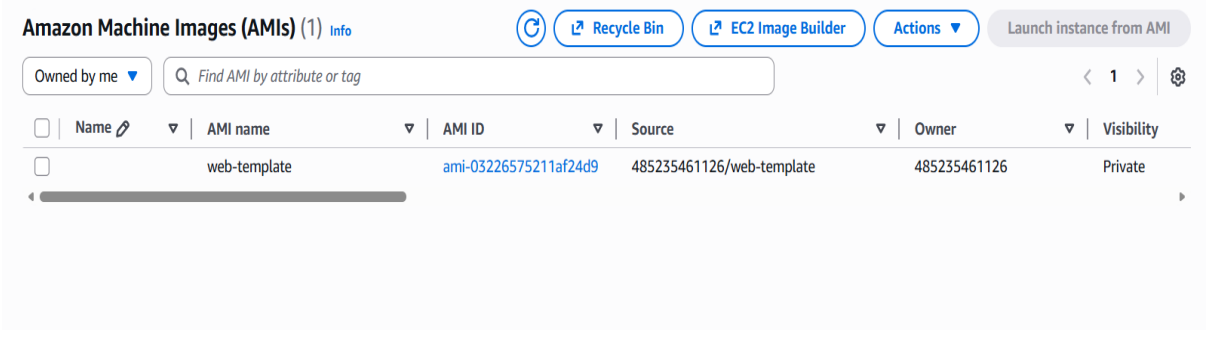
Java installed

```
[ec2-user@ip-172-31-42-130 ~]$ java --version
openjdk 17.0.17 2025-10-21 LTS
OpenJDK Runtime Environment Corretto-17.0.17.10.1 (build 17.0.17+10-LTS)
OpenJDK 64-Bit Server VM Corretto-17.0.17.10.1 (build 17.0.17+10-LTS, mixed mode, sharing)
[ec2-user@ip-172-31-42-130 ~]$
```

Git installed

```
   ,     #_
   ~\_  ####_        Amazon Linux 2023
  ~~  \_#####\
  ~~     \###|
  ~~       \#/ ___   https://aws.amazon.com/linux/amazon-linux-2023
   ~~       V~' '->
    ~~~         /
      ~~._.   _/
         _/ _/
       _/m/'
[ec2-user@ip-172-31-42-130 ~]$ git --version
git version 2.50.1
```

Template



GitHub Repository used to store nodes

Week3_Project / Scripts used for the nodes

odufuwabusola Rename Web-server-code to Scripts used for the nodes

Code Blame 23 lines (17 loc) · 369 Bytes

```
#frontend-code

#!/bin/bash
yum install httpd -y
systemctl start httpd
systemctl enable httpd
syste status httpd


#backend-code

#!/bin/bash
yum install git -y
yum install -y java-17-amazon-coretto -y
yum install maven-y
yum install -y python3-pip
python3 -m pip install --upgrade pip
python3 -m pip install virtualenv


git --version
java --version
python3 --version
```