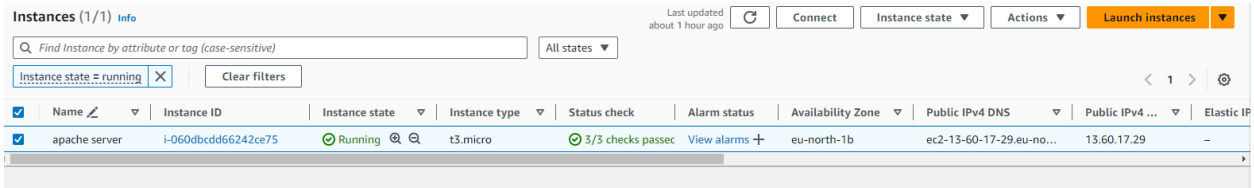
## Part 1: Setting Up LAMP Stack:

1.Launch EC2 Instance:




3.Install Components:

Install Apache, MySQL, and PHP packages using package manager commands.

```
ubuntu@ip-172-31-40-112:~$ sudo systemctl start apache2
ubuntu@ip-172-31-40-112:~$ sudo systemctl enable apache2
Synchronizing state of apache2.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable apache2
ubuntu@ip-172-31-40-112:~$ sudo systemctl status  apache2
● apache2.service - The Apache HTTP Server
     Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: enabled)
     Active: active (running) since Sat 2024-08-24 12:47:33 UTC; 5min ago
       Docs: https://httpd.apache.org/docs/2.4/
   Main PID: 2903 (apache2)
      Tasks: 55 (limit: 1078)
     Memory: 5.5M (peak: 5.6M)
        CPU: 57ms
     CGroup: /system.slice/apache2.service
             ├─2903 /usr/sbin/apache2 -k start
             ├─2905 /usr/sbin/apache2 -k start
             └─2906 /usr/sbin/apache2 -k start

Aug 24 12:47:33 ip-172-31-40-112 systemd[1]: Starting apache2.service - The Apache HTTP Server...
Aug 24 12:47:33 ip-172-31-40-112 systemd[1]: Started apache2.service - The Apache HTTP Server.
```

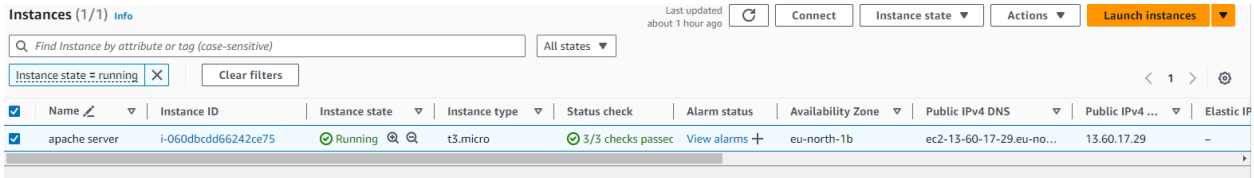
```
ubuntu@ip-172-31-40-112:~$ sudo systemctl start mysql
ubuntu@ip-172-31-40-112:~$ sudo systemctl enable mysql
Synchronizing state of mysql.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable mysql
ubuntu@ip-172-31-40-112:~$ sudo systemctl status mysql
● mysql.service - MySQL Community Server
     Loaded: loaded (/usr/lib/systemd/system/mysql.service; enabled; preset: enabled)
     Active: active (running) since Sat 2024-08-24 12:57:02 UTC; 5min ago
   Main PID: 4055 (mysqld)
     Status: "Server is operational"
      Tasks: 37 (limit: 1078)
     Memory: 353.4M (peak: 369.6M)
        CPU: 3.116s
     CGroup: /system.slice/mysql.service
             └─4055 /usr/sbin/mysqld

Aug 24 12:57:01 ip-172-31-40-112 systemd[1]: Starting mysql.service - MySQL Community Server...
Aug 24 12:57:02 ip-172-31-40-112 systemd[1]: Started mysql.service - MySQL Community Server.
```

**Part 2: Setting Up LEMP Stack:**

1.Connect to EC2 Instance:

SSH into the existing AWS EC2 instance




2.Install Components:

Install Nginx, MySQL, and PHP packages using package manager commands.

```
ubuntu@ip-172-31-40-112:~$ sudo systemctl enable nginx
Synchronizing state of nginx.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable nginx
ubuntu@ip-172-31-40-112:~$ sudo systemctl status nginx
× nginx.service - A high performance web server and a reverse proxy server
     Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: enabled)
     Active: failed (Result: exit-code) since Sat 2024-08-24 13:34:02 UTC; 55s ago
       Docs: man:nginx(8)
        CPU: 14ms

Aug 24 13:34:00 ip-172-31-40-112 nginx[11661]: nginx: [emerg] bind() to 0.0.0.0:80 failed (98: Address already in use)
Aug 24 13:34:00 ip-172-31-40-112 nginx[11661]: nginx: [emerg] bind() to [::]:80 failed (98: Address already in use)
Aug 24 13:34:01 ip-172-31-40-112 nginx[11661]: nginx: [emerg] bind() to 0.0.0.0:80 failed (98: Address already in use)
Aug 24 13:34:01 ip-172-31-40-112 nginx[11661]: nginx: [emerg] bind() to [::]:80 failed (98: Address already in use)
Aug 24 13:34:01 ip-172-31-40-112 nginx[11661]: nginx: [emerg] bind() to 0.0.0.0:80 failed (98: Address already in use)
Aug 24 13:34:01 ip-172-31-40-112 nginx[11661]: nginx: [emerg] bind() to [::]:80 failed (98: Address already in use)
Aug 24 13:34:02 ip-172-31-40-112 nginx[11661]: nginx: [emerg] still could not bind()
Aug 24 13:34:02 ip-172-31-40-112 systemd[1]: nginx.service: Control process exited, code=exited, status=1/FAILURE
Aug 24 13:34:02 ip-172-31-40-112 systemd[1]: nginx.service: Failed with result 'exit-code'.
Aug 24 13:34:02 ip-172-31-40-112 systemd[1]: Failed to start nginx.service - A high performance web server and a reverse proxy server.
```

```
ubuntu@ip-172-31-40-112:~$ sudo systemctl start mysql
ubuntu@ip-172-31-40-112:~$ sudo systemctl enable mysql
Synchronizing state of mysql.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable mysql
ubuntu@ip-172-31-40-112:~$ sudo systemctl status mysql
● mysql.service - MySQL Community Server
     Loaded: loaded (/usr/lib/systemd/system/mysql.service; enabled; preset: enabled)
     Active: active (running) since Sat 2024-08-24 12:57:02 UTC; 5min ago
   Main PID: 4055 (mysqld)
     Status: "Server is operational"
      Tasks: 37 (limit: 1078)
     Memory: 353.4M (peak: 369.6M)
        CPU: 3.116s
     CGroup: /system.slice/mysql.service
             └─4055 /usr/sbin/mysqld

Aug 24 12:57:01 ip-172-31-40-112 systemd[1]: Starting mysql.service - MySQL Community Server...
Aug 24 12:57:02 ip-172-31-40-112 systemd[1]: Started mysql.service - MySQL Community Server.
```