

1. Launch EC2 Instance

1. Go to **AWS Management Console** → **EC2** → **Launch Instance**.
 2. Select the **AMI**:
 - RHEL 8/9 → Red Hat Enterprise Linux
 - Amazon Linux 2/2023 → Amazon Linux
 3. Choose instance type → Configure instance → Add storage → Configure security group:
 - Allow ports:
 - **HTTP** → **80**
 - **HTTPS** → **443** (if needed)
 - **MySQL/Aurora** → **3306** (if connecting externally)
 4. Launch instance with a **key pair**.
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2. Connect to EC2 Instance

```
# Replace with your key and public IP
ssh -i my-key.pem ec2-user@<EC2_PUBLIC_IP>
# For RHEL, default user may be 'ec2-user' or 'root'
```

3. Update the System

RHEL / Amazon Linux

```
sudo yum update -y          # Amazon Linux 2 & RHEL 7/8
sudo dnf update -y          # RHEL 8/9
```

4. Install Apache2 (HTTPD)

RHEL / Amazon Linux

```
sudo yum install httpd -y    # For Amazon Linux & RHEL 7
sudo dnf install httpd -y    # For RHEL 8/9
```

Start and Enable Service

```
sudo systemctl start httpd
sudo systemctl enable httpd
sudo systemctl status httpd
```

Test Apache

```
# Open in browser
```

```
http://<EC2_PUBLIC_IP>  
# You should see "Apache HTTP Server Test Page"
```

5. Install MySQL

Note: Amazon Linux often uses MariaDB as MySQL replacement.

RHEL / Amazon Linux

```
# Install MySQL / MariaDB  
sudo yum install mariadb-server mariadb -y  
sudo dnf install mariadb-server mariadb -y    # RHEL 8/9  
  
# Start and enable  
sudo systemctl start mariadb  
sudo systemctl enable mariadb  
sudo systemctl status mariadb
```

6. Secure MySQL Installation

```
sudo mysql_secure_installation
```

- Set root password
 - Remove anonymous users
 - Disallow remote root login
 - Remove test database
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7. Connect to MySQL

```
mysql -u root -p  
# Enter password set above
```

Create Sample Database and Table

```
CREATE DATABASE testdb;  
USE testdb;  
  
CREATE TABLE users (  
    id INT AUTO_INCREMENT PRIMARY KEY,  
    name VARCHAR(50),  
    email VARCHAR(50)  
);  
  
INSERT INTO users (name, email) VALUES ('Atul', 'atul@example.com');  
SELECT * FROM users;
```

8. Configure Apache + PHP (Optional, for web apps)

```
sudo yum install php php-mysqlnd -y
sudo systemctl restart httpd
```

Test PHP

```
echo "<?php phpinfo(); ?>" | sudo tee /var/www/html/info.php
# Visit: http://<EC2_PUBLIC_IP>/info.php
```

9. Verify Services

```
sudo systemctl status httpd
sudo systemctl status mariadb
```

10. Firewall / Security

- Ensure **HTTP (80)**, **HTTPS (443)**, and **MySQL (3306)** ports are open in **AWS Security Group**.
- RHEL/Amazon Linux firewall (optional):

```
sudo firewall-cmd --permanent --add-service=http
sudo firewall-cmd --permanent --add-service=https
sudo firewall-cmd --reload
```

Notes:

- Amazon Linux 2 prefers **MariaDB**, fully compatible with MySQL.
- RHEL 8/9 uses **dnf** by default.
- Always **update packages** first.
- Apache root directory: `/var/www/html`
- MySQL data directory: `/var/lib/mysql`