

# Project 1 - Deploying a Multi-Tier Website Using AWS EC2

## 1. EC2 Ubuntu Server:

The screenshot displays the AWS Management Console interface for an EC2 instance. At the top, there's a header for 'Instances (1/1)' with a search bar and various action buttons like 'Connect', 'Instance state', 'Actions', and 'Launch instances'. Below this is a table listing the instance 'Project1\_Demo\_Server1' with its ID 'i-0a4d7dfeca2b41727', state 'Running', type 't2.micro', and other details. The instance is shown as 'Running' with a green checkmark and '2/2 checks passed'. Below the table, the 'Details' tab is selected, showing a summary of the instance's configuration, including its ID, public IPv4 address (54.236.96.114), private IPv4 addresses (172.31.29.230), and public IPv4 DNS (ec2-54-236-96-114.compute-1.amazonaws.com).

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
Project1_Demo_Server1	i-0a4d7dfeca2b41727	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1d

**i-0a4d7dfeca2b41727 (Project1\_Demo\_Server1)**

**Details** | Status and alarms | Monitoring | Security | Networking | Storage | Tags

**Instance summary** Info

Instance ID i-0a4d7dfeca2b41727 (Project1_Demo_Server1)	Public IPv4 address 54.236.96.114   <a href="#">open address</a>	Private IPv4 addresses 172.31.29.230
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-54-236-96-114.compute-1.amazonaws.com   <a href="#">open address</a>
Hostname type	Private IP DNS name (IPv4 only)	

## 2. RDS Database :

The screenshot shows the AWS Management Console for an RDS database instance. The header includes 'Databases (1)' with a search bar and buttons for 'Group resources', 'Modify', 'Actions', 'Restore from S3', and 'Create database'. Below the header is a table listing the database instance 'database-1' with its status 'Available', role 'Instance', engine 'MySQL Community', region 'us-east-1b', and size 'db.t3.micro'. The instance is shown as 'Available' with a green checkmark.

DB identifier	Status	Role	Engine	Region & ...	Size	Recommendations	C...
database-1	Available	Instance	MySQL Community	us-east-1b	db.t3.micro	-	

## 3. Instance connected , deleted html file and created PHP file:

```
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /usr/lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /usr/lib/systemd/system/apache-htcacheclean.service.
Processing triggers for ufw (0.36.2-6) ...
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for libc-bin (2.39-0ubuntu8.2) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-29-230:~$ cd /var/www/html
ubuntu@ip-172-31-29-230:/var/www/html$ ls
index.html
ubuntu@ip-172-31-29-230:/var/www/html$ sudo rm index.html
ubuntu@ip-172-31-29-230:/var/www/html$ sudo nano index.php
ubuntu@ip-172-31-29-230:/var/www/html$
```

#### 4. ASG Implemented with Image, template:

The screenshot shows the 'Project1\_ASG' details page in the AWS Management Console. The 'Details' tab is selected, showing the following information:

- Group details:**
  - Auto Scaling group name: Project1\_ASG
  - Date created: Wed Sep 04 2024 15:15:28 GMT+0530 (India Standard Time)
  - Desired capacity: 5
  - Minimum capacity: 2
  - Maximum capacity: 6
  - Desired capacity type: Units (number of instances)
  - Status: -
  - Amazon Resource Name (ARN): arnaws:autoScaling:us-east-1:043309335618:autoScalingGroup:c573c48c-518c-48d6-b40f-98829bf31a69:autoScalingGroupName/Project1\_ASG
- Launch template:** (Link to view details)

#### • Multiple server through ASG

The screenshot shows the 'Instances' page for the 'Project1\_ASG'. It displays a table of instances with the following columns: Name, Instance ID, Instance state, Instance type, Status check, Alarm status, and Availability. There are 4 instances listed, all in a 'Running' state.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability
Project1_demo_Server2	i-0486ba7fc1c285a73	Running	t1.micro	2/2 checks passed	View alarms	us-east-1b
Project1_demo_Server3	i-02a8c7b3663b3f9ee	Running	t1.micro	2/2 checks passed	View alarms	us-east-1a
Project1_demo_server4	i-066142847842ea70b	Running	t1.micro	2/2 checks passed	View alarms	us-east-1c
Project1_Demo_Server1	i-0f5bf27e37744bc7f	Running	t2.micro	2/2 checks passed	View alarms	us-east-1c

#### 5. Changed Hostname in website:

```
GNU nano 7.2 index.php
</div>
</td>
</tr>
</table>
</div>
</div>
<?php
$firstname=$_POST['firstname'];
$email=$_POST['email'];
$servername = "database-1.crk28u6q060p.us-east-1.rds.amazonaws.com";
$username = "admin";
$password = "Admin123";
$db = "intel";
// Create connection
$conn = new mysqli($servername, $username, $password, $db);
// Check connection
if ($conn->connect_error) {
```

#### 6. Instance connected to RDS-Mysql database and table created and inserted value in it

##### a. EC2 connected to Mysql

```
Running kernel seems to be up-to-date.
No services need to be restarted.
No containers need to be restarted.
No user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-88-230:~$ mysql -h database-1.crk28u6q060p.us-east-1.rds.amazonaws.com
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 33
Server version: 8.0.35 Source distribution

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql>
```

## b. Database

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| intel      |
| mysql      |
| performance_schema |
| sys        |
+-----+
```

## c. Data named table created and inserted value through website

```
mysql> create table intel.data(firstname varchar(30), email varchar(50));
Query OK, 0 rows affected (0.02 sec)

mysql>
```

i-Of5bf27e37744bc7f (Project1\_Demo\_Server1)

## d. Inserted through Website

---

Name:

Email:

Submit

New record created successfully

## e. Record Shown in Table :

```
mysql> select * from intel.data;
+-----+-----+
| firstname | email |
+-----+-----+
| Trupti    | demo123@gmail.com |
| Trupti    | desaitrupti650@gmail.com |
+-----+-----+
2 rows in set (0.00 sec)

mysql>
```

i-Of5bf27e37744bc7f (Project1\_Demo\_Server1)