

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

## Steps To Solve: 1. Launch an EC2 Instance

The screenshot shows the AWS Management Console for an EC2 instance. The left sidebar contains navigation links for EC2, Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Capacity Manager, Images, AMIs, AMI Catalog, and Elastic Block Store. The main content area displays the 'Instance summary for i-03f8194d74dbfa52f (Project1-ec2)'. The instance is in the 'Running' state. Key details include: Instance ID: i-03f8194d74dbfa52f, Public IPv4 address: 54.227.132.30, Private IPv4 address: 172.31.19.180, Public DNS: ec2-54-227-132-30.compute-1.amazonaws.com, Instance type: t3.micro, VPC ID: vpc-0831fdec33bf09a7, Subnet ID: subnet-0a837bd217f7bc11, and Instance ARN: arn:aws:ec2:us-east-1:395069634226:instance/i-03f8194d74dbfa52f.

## 2. Enable Auto Scaling on these instances (minimum 2)

The screenshot shows the 'Auto Scaling groups' page in the AWS Management Console. It displays a table with one group named 'Project1-ec2'. The group is using the 'Autoscaling' launch template, has a desired capacity of 2, and is spread across 2 Availability Zones. The table columns include Name, Launch template/configuration, Instances, Status, Desired capacity, Min, Max, and Availability Zones.

## 3. Create an RDS Instance

The screenshot shows the 'database-1' instance details in the AWS Management Console. The instance is in the 'Available' state. Key details include: DB identifier: database-1, CPU: 4.14%, Status: Available, Class: db.t4g.micro, Role: Instance, Engine: MySQL Community, Region & AZ: us-east-1d, and Current activity: 2 Connections. The 'Connectivity & security' tab is selected, showing options for 'Connect using' (Code snippets, CloudShell, Endpoints), 'Internet access gateway' (Disabled), 'IAM Authentication' (Disabled), 'Programming language' (MySQL (macOS)), and 'Endpoint type' (Instance endpoint).

## 4. Create Database & Table in RDS instance: a. Database name: intel b. Table name: data c. Database password: intel123

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| intel      |
| mysql      |
| performance_schema |
| sys        |
+-----+
5 rows in set (0.01 sec)
```

## 5. Change hostname in website

← → ↻ Not secure 54.227.132.30 ☆ 📄 ⓘ ⋮

Name:

Email:

## 6. Allow traffic from EC2 to RDS instance

VPC > Security Groups > sg-04d53b0c3d888b532 - rds-ec2-1

VPC dashboard < AWS Global View ⓘ Filter by VPC ▾

▼ Virtual private cloud

- Your VPCs
- Subnets
- Route tables
- Internet gateways
- Egress-only internet gateways
- Carrier gateways
- DHCP option sets
- Elastic IPs
- Managed prefix lists
- NAT gateways
- Peering connections
- Route servers

### sg-04d53b0c3d888b532 - rds-ec2-1

Actions ▾

**Details**

**Security group name**  
rds-ec2-1

**Security group ID**  
sg-04d53b0c3d888b532

**Description**  
Security group attached to database1 to allow EC2 instances with specific security groups attached to connect to the database. Modification could lead to connection loss.

**VPC ID**  
vpc-0831f1ec33bf09a7

**Owner**  
395069634226

**Inbound rules count**  
1 Permission entry

**Outbound rules count**  
0 Permission entries

[Inbound rules](#) | [Outbound rules](#) | [Sharing](#) | [VPC associations](#) | [Related resources - new](#) | [Tags](#)

**Inbound rules (1)** Manage tags Edit inbound rules

<input type="checkbox"/>	Name ▾	Security group rule ID ▾	IP version ▾	Type ▾	Protocol ▾	Port range ▾
<input type="checkbox"/>	-	sgr-049f6a5190694e46e	-	MySQL/Aurora	TCP	3306

## 7. Allow all-traffic to EC2 instance

VPC > Security Groups > sg-04b19ed5d0e582713 - Project-1

VPC dashboard

AWS Global View

Filter by VPC

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

Carrier gateways

DHCP option sets

Elastic IPs

Managed prefix lists

NAT gateways

Peering connections

Route servers

sg-04b19ed5d0e582713 - Project-1

Actions

Details

Security group name

Project-1

Owner

395069634226

Security group ID

sg-04b19ed5d0e582713

Inbound rules count

1 Permission entry

Description

Allow

Outbound rules count

1 Permission entry

VPC ID

vpc-0831fdec33fbf09a7

Inbound rules

Outbound rules

Sharing

VPC associations

Related resources - new

Tags

Inbound rules (1)

Manage tags

Edit inbound rules

Search

	Name	Security group rule ID	IP version	Type	Protocol	Port range
<input type="checkbox"/>	-	sgr-075d2e46f83207cc5	IPv4	All traffic	All	All