

# Capstone Project - 1

## 1. Launched an instance and created a Launch template for it with “t2.micro” type

The screenshot shows two side-by-side AWS EC2 management pages. On the left, the 'Instances' page displays a single instance named 'project-1' with the ID 'i-087ff0fab8b8a7d90' in the 'Running' state. On the right, the 'Launch Templates' page shows a single launch template named 'prj-auto-1' with the ID 'lt-0e52c16ab042f6b7'. Both pages are set to the 'Oregon' region.

## 2. Created an Autoscaling group with minimum 2 instances running

The screenshot shows the 'Auto Scaling groups' page. It lists a single group named 'prj-auto-1' which has a minimum capacity of 2 instances. The desired capacity is also set to 2. The group is currently scaling up, with one instance in the 'Running' state and another in the 'Initializing' state.

The screenshot shows the 'Instances' page with three instances listed. Two instances are in the 'Running' state (one in us-west-2c and one in us-west-2a), and one is in the 'Initializing' state (in us-west-2b). All three instances are of the 't2.micro' type and are located in the 'us-west-2' region.

## 3. Created a MySQL database with DB name and password as per suggested

The screenshot shows the 'Create database' page for MySQL. It includes sections for 'Choose a database creation method' (Standard create or Easy create), 'Engine options' (Aurora MySQL Compatible, Aurora PostgreSQL Compatible, MySQL, MariaDB), and detailed information about MySQL's features and costs. A 'Create database' button is at the bottom right.

The screenshot shows the 'Databases' page for Amazon RDS. It lists a single database named 'intel' which was successfully created. The database is in the 'Backing-up' status and is associated with the 'MySQL' engine in the 'us-west-2c' region. A 'Create database' button is visible at the top right.

#### 4. Connected to the DB Engine in the EC2 instance with table name “data” and database name as “intel”

```
aws Services Search [Option+S]
Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

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

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| intel |
| mysql |
| performance_schema |
| sys |
+-----+
5 rows in set (0.00 sec)

mysql> use intel;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> show tables;
+-----+
| Tables_in_intel |
+-----+
| data |
+-----+
1 row in set (0.01 sec)

mysql>
```

#### 5. Changed hostname to some other name

```
aws Services Search [Option+S] Oregon Dev Here
ubuntu@ip-172-31-13-134:~$ hostname
ip-172-31-13-134
ubuntu@ip-172-31-13-134:~$ sudo hostname mysql1
ubuntu@ip-172-31-13-134:~$ sudo hostname
mysql1
ubuntu@ip-172-31-13-134:~$
```

#### 6. Established connection between RDS and the instances

The screenshot shows the AWS RDS console under the 'Databases' section. A success message at the top states: "Connection setup successfully for RDS database intel and EC2 instance i-024ed642716b074d8". Below this, there is a note about creating a Blue/Green Deployment. The main table displays one database entry:

DB identifier	Status	Role	Engine	Region & AZ	Size	Recommendations
intel	Available	Instance	MySQL Community	us-west-2c	db.t3.micro	2 Informational

#### 7. Allowed all traffic to the instances by changing the inbound rule of SG (launch wizard -5) as all traffic

The screenshot shows the AWS Security Groups (SG) console. Under the "Inbound rules" tab, there are four rules listed:

Security group ID	Type	Protocol	Port range	Source	Description - optional
sgr-07ce2987b2be921e0	SSH	TCP	22	Cust... 0.0.0.0/0	
sgr-0cb90ee83ff2d3b7f	HTTP	TCP	80	Cust... 0.0.0.0/0	
sgr-0c60a2c096220caa2	HTTPS	TCP	443	Cust... 0.0.0.0/0	
-	All traffic	All	All	Any... 0.0.0.0/0	

A warning message at the bottom states: "Rules with source of 0.0.0.0/0 or ::/ allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only." There are "Save rules" and "Preview changes" buttons at the bottom.