

CLOUD COMPUTING

Branch	CS - AIML
Division	A
Batch	2
GR-no	12311493
Roll no	54
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Experiment No. 04:

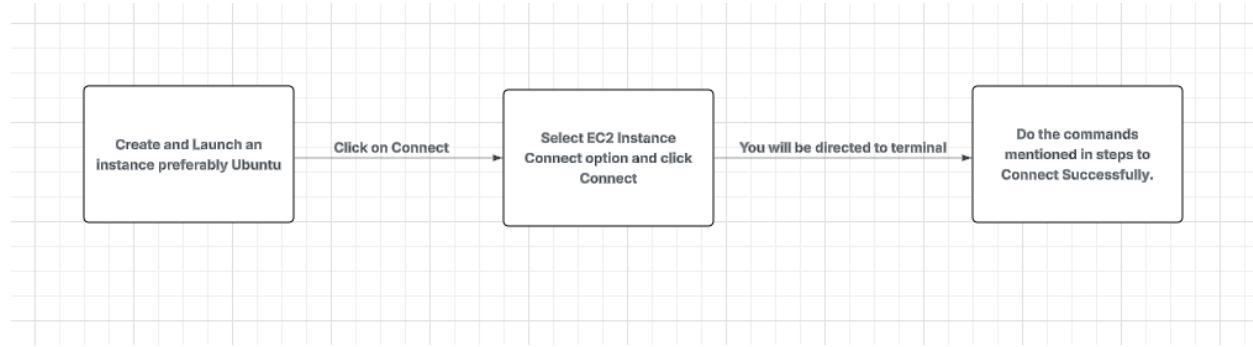
TITLE:

To use Infrastructure as a Service to facilitates for creating and deleting compute resources.
Create network and attach volumes to run instances.

OBJECTIVES:

- 1) Create an AWS account and log in to the AWS Management Console.
- 2) Access the S3 service.
- 3) Create and configure an S3 bucket for storing files.
- 4) Upload and manage data in the bucket.

Flowchart:



Steps:

1) Create and Launch an Instance

Name and tags [Info](#)

Name
sql-server [Add additional tags](#)

Application and OS Images (Amazon Machine Image) [Info](#)

An AMI contains the operating system, application server, and applications for your instance. If you don't see a suitable AMI below, use the search field or choose [Browse more AMIs](#).

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EC2

- Dashboard
- EC2 Global View
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Instance summary for i-0321ef93798acbd5f (sql) [Info](#)

Updated less than a minute ago

Instance ID	i-0321ef93798acbd5f	Public IPv4 address	-
IPv6 address	-	Instance state	Stopped
Hostname type	IP name: ip-172-31-29-169.eu-north-1.compute.internal	Private IP DNS name (IPv4 only)	ip-172-31-29-169.eu-north-1.compute.internal
Answer private resource DNS name	IPv4 (A)	Instance type	t3.micro
Auto-assigned IP address	-	VPC ID	vpc-0f109ae26463222f4
IAM Role	-	Subnet ID	subnet-0735hd20da0fe
AWS Compute Optimizer finding	Opt-in to AWS Compute Optimizer for recommendations.	Auto Scaling Group name	-

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2) Select the instance and click on connect

The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with navigation links for EC2, Dashboard, EC2 Global View, Events, Instances (with sub-links for Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations), and Images (AMIs, AMI Catalog). The main content area is titled "Instances (1/3) Info" and shows a table with three rows. The first two rows have checkboxes next to them, while the third row, "sql", has a checked checkbox and is highlighted with a blue border. The table columns include Name, Instance ID, Instance state, Instance type, Status check, Alarm status, and Availability. Below the table, a modal window for the "sql" instance is open, showing the "Details" tab. It displays the Instance ID (i-0321ef93798acbd5f), Public IPv4 address (13.51.161.11), Private IPv4 addresses (172.31.29.169), Instance state (Running), and Public DNS. At the bottom of the modal, the URL is https://eu-north-1.console.aws.amazon.com/ec2/home?region=eu-north-1#ConnectToInstance:instanceId=i-0321ef93798acbd5f.

3) Select the EC2 Instance Connect Option and click Connect.

The screenshot shows the "Connect" page for the instance i-0321ef93798acbd5f. The top navigation bar includes links for EC2, Instances, and the specific instance ID. The main content area is titled "Connect" and "Info". It contains a section for "Connection type" with two options: "Connect using a Public IP" (selected) and "Connect using a Private IP". Below this, there's a "Public IPv4 address" section showing 13.51.161.11. There's also a "Username" field containing "ubuntu" and a note about the default username. At the bottom right are "Cancel" and "Connect" buttons.

4) After that you will be directed to the terminal

```

Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.3.0-1029-aws x86_64)

 * Documentation: https://help.ubuntu.com
 * Management: https://landscape.canonical.com
 * Support: https://ubuntu.com/pro

System information as of Sun Aug 17 16:24:37 UTC 2025

System load: 0.29 Temperature: -273.1 C
Usage of /: 36.9% of 6.71GB Processes: 114
Memory usage: 61% Users logged in: 0
Swap usage: 0% IPv4 address for ens5: 172.31.29.169

Expanded Security Maintenance for Applications is not enabled.

111 updates can be applied immediately.
66 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Mon Aug 11 07:04:41 2025 from 13.48.4.203
ubuntu@ip-172-31-29-169:~$
```

i-0321ef93798acbd5f (sql)
Public IPs: 13.51.161.11 Private IPs: 172.31.29.169

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5) Perform the following commands:

Step 1: Update the system

sudo apt update

Step 2: Install MySql

sudo apt install mysql-server

Step 3: Check the Status of MySql (Active or Inactive)

sudo systemctl status mysql

Step 4: Login to MySql as a root

sudo mysql

Step 5: Update the password for the MySql Server

ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY 'place-your-password-here';

FLUSH PRIVILEGES;

Step 6: Test the MySql server if it is working by running sample sql queries

CREATE DATABASE mysql_test;

USE mysql_test;

CREATE TABLE table1 (id INT, name VARCHAR(45));

INSERT INTO table1 VALUES(1, 'Virat'), (2, 'Sachin'), (3, 'Dhoni'), (4, 'ABD');

SELECT * FROM table1;

6) After these steps your database will be connected.

```
mysql> CREATE DATABASE mysql_test;
Query OK, 1 row affected (0.01 sec)

mysql> USE mysql_test
Database changed
mysql> CREATE TABLE table1 (id INT, name VARCHAR(45));
Query OK, 0 rows affected (0.03 sec)

mysql> INSERT INTO table1 VALUES(1,'Virat'),(2,'Sachin'),(3,'Dhoni');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM table1;
+---+---+
| id | name |
+---+---+
| 1 | Virat |
| 2 | Sachin |
| 3 | Dhoni |
+---+---+
3 rows in set (0.00 sec)
```

```
No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-29-169:~$ sudo systemctl status mysql
● mysql.service - MySQL Community Server
   Loaded: loaded (/usr/lib/systemd/system/mysql.service; enabled; preset: enabled)
   Active: active (running) since Mon 2025-08-11 07:12:31 UTC; 40s ago
     Process: 2587 ExecStartPre=/usr/share/mysql/mysql-systemd-start pre (code=exited, status=0/SUCCESS)
   Main PID: 2595 (mysqld)
      Status: "Server is operational"
        Tasks: 38 (limit: 1072)
       Memory: 351.3M (peak: 377.8M)
         CPU: 1.069s
        CGroup: /system.slice/mysql.service
                  └─2595 /usr/sbin/mysqld

Aug 11 07:12:30 ip-172-31-29-169 systemd[1]: Starting MySQL Community Server...
Aug 11 07:12:31 ip-172-31-29-169 systemd[1]: Started MySQL Community Server.
ubuntu@ip-172-31-29-169:~$ sudo mysql
Welcome to the MySQL monitor.  Commands end with ; or \g.
```

i-0321ef93798acbd5f (sql)

PublicIPs: 13.60.209.27 PrivateIPs: 172.31.29.169