

YESHWANTH CHAUHAN

RDS Lab

1. create RDS mysql database .
2. Create ubuntu instance and install mysql client
3. Connect your mysql db to your instance and add some data
4. Verify the data

Dynamo-DB Lab

1. create dynamo DB table.
 2. push the data entry to the table from the ec2 instance (install if any DB client required).
- You can refer to this document for this lab.

<https://enlear.academy/working-with-aws-dynamodb-table-aws-ec2-8b3689841f49>

To download mysql client on ubuntu instance :

```
sudo apt-get install mysql-client
```

To login to MYSQL:

```
mysql -h <your-rds-instance-endpoint> -P 3306 -u <your-rds-username> -p
```

To create Database: `CREATE DATABASE <your-database-name>;`

To create table: `CREATE TABLE <your-table-name> (id INT NOT NULL AUTO_INCREMENT, name VARCHAR(255) NOT NULL, PRIMARY KEY (id));`

To insert data: `INSERT INTO <your-table-name> (name) VALUES ('John'), ('Jane'), ('Bob');`

To verify data: `SELECT * FROM <your-table-name>;`

YESHWANTH CHAUHAN

The screenshot shows the AWS Management Console for the 'us-east-1' region. The 'Instances' page is active, displaying a list of EC2 instances. The instance 'testUbuntu' (ID: i-02c4c6d6a12a7d624) is in a 'Running' state. The console provides detailed information about the instance, including its Instance ID, Name, Instance type (t2.micro), and Network configuration (Public IPv4 address, Private IPv4 address, Elastic IP addresses, etc.).

Name	Instance ID	Instance state	Instance ty...	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6 IPs
testUbuntu	i-02c4c6d6a12a7d624	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-54-211-80-23.com...	54.211.80.23	-	-

Instance: i-02c4c6d6a12a7d624 (testUbuntu)

Details | Security | Networking | Storage | Status checks | Monitoring | Tags

Instance summary

Instance ID: i-02c4c6d6a12a7d624 (testUbuntu)

IPv6 address: -

Hostname type: IP name: ip-172-32-0-172.ec2.internal

Answer private resource DNS name: IPv4 (A)

Auto-assigned IP address: 54.211.80.23 (Public IP)

IAM Role: -

Instance details

Platform: Ubuntu (Inferred)

AMI ID: ami-0557a15b87f6559cf

Monitoring: disabled

The screenshot shows the AWS Management Console for the 'us-east-1' region. The 'RDS' page is active, displaying the 'database-1' instance. The console provides detailed information about the database, including its DB Identifier, CPU, Status, and Class. A green banner at the top indicates that the connection setup was successful for the RDS database 'database-1' and EC2 instance 'i-02c4c6d6a12a7d624'.

database-1

Summary

DB Identifier: database-1

CPU: 3.45%

Status: Available

Class: db.t3.micro

Role: Instance

Current activity: 0 Connections

Engine: MySQL Community

Region & AZ: us-east-1b

Connectivity & security

Endpoint & port

Endpoint: database-1.cmiiedprvfu9.us-east-1-rds.amazonaws.com

Port: 3306

Networking

Availability Zone: us-east-1b

VPC: vpc-080510ce70db5ada9

Subnet group: default-vpc-080510ce70db5ada9

Subnets: -

Security

VPC security groups: default (sg-0c6dfb3d0697073c9)

Active: rds-ec2-2 (sg-0ecfef7b7c52acb50)

Adding: -

Publicly accessible: No

Certificate authority: Info

YESHWANTH CHAUHAN

us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#databases:

awsNihonanimeThe Ultimate Guide...

ServicesSearch[Alt+S]

VPCEC2S3IAMCloudFormationCloudWatchAmazon EventBridgeAWS Auto Scaling

Connection setup successfully for RDS database database-1 and EC2 instance i-02c4d6da12a7d62472Details

RDS>Databases

Databases

Group resources

Modify

Actions

Restore from S3

Create database

Filter by databases

DB identifier	Role	Engine	Region & AZ	Size	Status	Actions	CPU	Current activity	Maintenance	VPC	Multi-AZ
database-1	Instance	MySQL Community	us-east-1b	db.t3.micro	Available	1 Action	3.16%	3 Connections	none	vpc-080510ce70db5ada9	No

FeedbackLanguage

25°C Mostly cloudy

© 2023, Amazon Web Services India Private Limited or its affiliates. PrivacyTermsCookie preferences

23:41 23-03-2023

us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#database-id=database-1&is-cluster=false&tab=configuration

awsNihonanimeThe Ultimate Guide...

ServicesSearch[Alt+S]

VPCEC2S3IAMCloudFormationCloudWatchAmazon EventBridgeAWS Auto Scaling

Connectivity & securityMonitoringLogs & eventsConfigurationMaintenance & backupsTags

Instance

Configuration

DB instance ID
database-1

Engine version
8.0.28

DB name
-

License model
General Public License

Option groups
default:mysql8.0 In sync

Amazon Resource Name (ARN)
arnaws:rds:us-east-1:471963814578:db:database-1

Resource ID
db-7074738R0DE3GAB54N3ZVH0BBY

Created time
March 23, 2023, 22:30 (UTC+05:30)

DB instance parameter group
default:mysql8.0 In sync

Deletion protection
Disabled

Instance class

Instance class
db.t3.micro

vCPU
2

RAM
1 GB

Availability

Master username
admin

Master password

IAM DB authentication
Not enabled

Multi-AZ
No

Secondary Zone
-

Storage

Encryption
Not enabled

Storage type
General Purpose SSD (gp2)

Storage
20 GiB

Provisioned IOPS
-

Storage throughput
-

Storage autoscaling
Enabled

Maximum storage threshold
1000 GiB

Performance Insights

Performance Insights enabled
Turned off

https://us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#

25°C Mostly cloudy

© 2023, Amazon Web Services India Private Limited or its affiliates. PrivacyTermsCookie preferences

23:41 23-03-2023

YESHWANTH CHAUHAN

```
ubuntu@ip-172-32-0-172:~$ ssh -i "NEWKEYS.pem" ubuntu@ec2-54-211-80-23.compute-1.amazonaws.com
Warning: Identity file NEWKEYS.pem not accessible: No such file or directory.
The authenticity of host 'ec2-54-211-80-23.compute-1.amazonaws.com (54.211.80.23)' can't be established.
ECDSA key fingerprint is SHA256:OFFtkwEztbELJAIG783EZ3BG/QtNS10IH9083dthock.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-54-211-80-23.compute-1.amazonaws.com,54.211.80.23' (ECDSA) to the list of known hosts.
ubuntu@ec2-54-211-80-23.compute-1.amazonaws.com: Permission denied (publickey).

C:\Users\Yesh>ls -l
ls: is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Yesh>ssh -i "NEWKEYS.pem" ubuntu@ec2-54-211-80-23.compute-1.amazonaws.com
Warning: Identity file NEWKEYS.pem not accessible: No such file or directory.
ubuntu@ec2-54-211-80-23.compute-1.amazonaws.com: Permission denied (publickey).

C:\Users\Yesh>vi
vi: is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Yesh>cd downloads

C:\Users\Yesh\Downloads>ssh -i "NEWKEYS.pem" ubuntu@ec2-54-211-80-23.compute-1.amazonaws.com
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-1028-aws x86_64)

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

System information as of Thu Mar 23 16:53:16 UTC 2023

System load:  0.1015625      Processes:    102
Usage of /:   19.8% of 7.57GB Users logged in: 0
Memory usage: 19%           IPv4 address for eth0: 172.32.0.172
Swap usage:   0%

25°C
Mostly cloudy

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

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

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-32-0-172:~$ sudo apt-get install mysql-client
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  mysql-client-8.0 mysql-client-core-8.0 mysql-common
The following NEW packages will be installed:
  mysql-client mysql-client-8.0 mysql-client-core-8.0 mysql-common
0 upgraded, 4 newly installed, 0 to remove and 0 not upgraded.
Need to get 2716 kB of archives.
After this operation, 62.1 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client-8.0 amd64 8.0.32-0ubuntu0.22.04.2 [2677 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 mysql-common all 5.8+1.0.8 [7212 B]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client-8.0 amd64 8.0.32-0ubuntu0.22.04.2 [22.7 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client all 8.0.32-0ubuntu0.22.04.2 [9350 B]
```

YESHWANTH CHAUHAN

```
ubuntu@ip-172-32-0-172:~$ sudo apt-get install mysql-client
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client all 8.0.32-0ubuntu0.22.04.2 [9350 B]
Fetched 2716 kB in 0s (14.4 MB/s)
Selecting previously unselected package mysql-client-core-8.0.
(Reading database ... 63605 files and directories currently installed.)
Preparing to unpack .../mysql-client-core-8.0_8.0.32-0ubuntu0.22.04.2_amd64.deb ...
Unpacking mysql-client-core-8.0 (8.0.32-0ubuntu0.22.04.2) ...
Selecting previously unselected package mysql-common.
Preparing to unpack .../mysql-common_5.8+1.0.8_all.deb ...
Unpacking mysql-common (5.8+1.0.8) ...
Selecting previously unselected package mysql-client-8.0.
Preparing to unpack .../mysql-client-8.0_8.0.32-0ubuntu0.22.04.2_amd64.deb ...
Unpacking mysql-client-8.0 (8.0.32-0ubuntu0.22.04.2) ...
Selecting previously unselected package mysql-client.
Preparing to unpack .../mysql-client_8.0.32-0ubuntu0.22.04.2_all.deb ...
Unpacking mysql-client (8.0.32-0ubuntu0.22.04.2) ...
Setting up mysql-common (5.8+1.0.8) ...
update-alternatives: using /etc/mysql/my.cnf.fallback to provide /etc/mysql/my.cnf (my.cnf) in auto mode
Setting up mysql-client-core-8.0 (8.0.32-0ubuntu0.22.04.2) ...
Setting up mysql-client-8.0 (8.0.32-0ubuntu0.22.04.2) ...
Setting up mysql-client (8.0.32-0ubuntu0.22.04.2) ...
Processing triggers for man-db (2.10.2-1) ...
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-172-32-0-172:~$ client_loop: send disconnect: Connection reset

C:\Users\Yesh\Downloads>ssh -i "NEWKEYS.pem" ubuntu@ec2-54-211-80-23.compute-1.amazonaws.com
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-1028-aws x86_64)

 * Documentation:  https://help.ubuntu.com
```

```
ubuntu@ip-172-32-0-172:~$ sudo apt-get install mysql-client
 * Management:  https://landscape.canonical.com
 * Support:     https://ubuntu.com/advantage

System information as of Thu Mar 23 17:18:44 UTC 2023

System load:  0.0078125      Processes:            100
Usage of /:   20.8% of 7.57GB Users logged in:          1
Memory usage: 23%           IPv4 address for eth0: 172.32.0.172
Swap usage:   0%

 * Introducing Expanded Security Maintenance for Applications.
   Receive updates to over 25,000 software packages with your
   Ubuntu Pro subscription. Free for personal use.

   https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

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

Last login: Thu Mar 23 16:53:19 2023 from 157.45.83.199
ubuntu@ip-172-32-0-172:~$ mysql -h <your-rds-instance-endpoint> -P 3306 -u <your-rds-username> -p
-bash: your-rds-instance-endpoint: No such file or directory
ubuntu@ip-172-32-0-172:~$ mysql -h database-1.cmiedprvfu9.us-east-1.rds.amazonaws.com -P 3306 -u admin -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 20
Server version: 8.0.28 Source distribution

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.
```

YESHWANTH CHAUHAN

```
ubuntu@ip-172-32-0-172:~$ ssh -i "NEWKEYS.pem" ubuntu@ec2-54-211-80-23.compute-1.amazonaws.com
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-1028-aws x86_64)

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

System information as of Thu Mar 23 17:28:31 UTC 2023

System load:  0.0               Processes:    102
Usage of /:   20.8% of 7.57GB   Users logged in: 1
Memory usage: 22%              IPv4 address for eth0: 172.32.0.172
Swap usage:   0%

 * Introducing Expanded Security Maintenance for Applications.
   Receive updates to over 25,000 software packages with your
   Ubuntu Pro subscription. Free for personal use.

   https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.
```

```
ubuntu@ip-172-32-0-172:~$ mysql -h database-1.cmiedprvfu9.us-east-1.rds.amazonaws.com -P 3306 -u admin -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 23
Server version: 8.0.28 Source distribution

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

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> create database blackdata;
Query OK, 1 row affected (0.01 sec)

mysql> CREATE TABLE Employees (
->   EmployeeID INT PRIMARY KEY,
->   Name VARCHAR(50) NOT NULL,
->   Age INT
-> );
mysql> CREATE TABLE Employees ( EmployeeID INT PRIMARY KEY, Name VARCHAR(50) NOT NULL, Age INT );^C
mysql> ^CEATE TABLE Employees ( EmployeeID INT PRIMARY KEY, Name VARCHAR(50) NOT NULL, Age INT );
mysql> CREATE TABLE Employees ( EmployeeID INT PRIMARY KEY, Name VARCHAR(50) NOT NULL, Age INT );
ERROR 1046 (3D000): No database selected
mysql> CREATE TABLE Employees ( EmployeeID INT PRIMARY KEY, Name VARCHAR(50) NOT NULL, Age INT );
ERROR 1046 (3D000): No database selected
mysql> CREATE TABLE tablename (id INT NOT NULL AUTO_INCREMENT, name VARCHAR(255) NOT NULL, PRIMARY KEY (id));
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '(id))' at line 1
mysql> CREATE TABLE tablename (id INT NOT NULL AUTO_INCREMENT, name yesh NOT NULL, PRIMARY KEY (id));
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'yesh NOT NULL, PRIMARY KEY (id))' at line 1
mysql> CREATE TABLE tablename (
->   id INT NOT NULL AUTO_INCREMENT,
->   name VARCHAR(255) NOT NULL,
->   PRIMARY KEY (id))
```

YESHWANTH CHAUHAN

```
ubuntu@ip-172-32-0-172:~$ mysql
mysql> CREATE TABLE tablename ( id INT NOT NULL AUTO_INCREMENT, name VARCHAR(255) NOT NULL, PRIMARY KEY (id) );
mysql> ^C
ERROR 1064 (3D000): No database selected
mysql> CREATE TABLE tablename ( id INT NOT NULL AUTO_INCREMENT, name VARCHAR(yesh) NOT NULL, PRIMARY KEY (id) );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'yesh) NOT NULL, PRIMARY KEY (id) )' at line 1
mysql> CREATE TABLE tablename ( id INT NOT NULL AUTO_INCREMENT, name VARCHAR(yesh) NOT NULL, PRIMARY KEY (1) );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'yesh) NOT NULL, PRIMARY KEY (1) )' at line 1
mysql> CREATE TABLE yeshwanth( id INT NOT NULL AUTO_INCREMENT, name VARCHAR(yesh) NOT NULL, PRIMARY KEY (1) );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'yesh) NOT NULL, PRIMARY KEY (1) )' at line 1
mysql> CREATE TABLE employees (
-> id INT NOT NULL,
-> name VARCHAR(50) NOT NULL,
-> email VARCHAR(50) NOT NULL,
-> salary DECIMAL(10,2),
-> PRIMARY KEY (id)
-> );
ERROR 1064 (3D000): No database selected
mysql> CREATE TABLE employees ( id INT NOT NULL, name VARCHAR(50) NOT NULL, email VARCHAR(50) NOT NULL, salary DECIMAL(10,2), PRIMARY KEY (id) );
ERROR 1064 (3D000): No database selected
mysql> use database_name;
ERROR 1049 (42000): Unknown database 'database_name'
mysql> use blackdata;
Database changed
mysql> CREATE TABLE employees ( id INT NOT NULL, name VARCHAR(50) NOT NULL, email VARCHAR(50) NOT NULL, salary DECIMAL(10,2), PRIMARY KEY (id) );
Query OK, 0 rows affected (0.04 sec)

mysql> show databases;
-> show databases;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'show databases' at line 2
```

YESHWANTH CHAUHAN

```
ubuntu@ip-172-32-0-172:~$ ssh -i "NEWKEYS.pem" ubuntu@ec2-54-211-80-23.compute-1.amazonaws.com
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-1028-aws x86_64)

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

System information as of Thu Mar 23 18:05:48 UTC 2023

System load: 0.0          Processes: 106
Usage of /: 20.8% of 7.57GB Users logged in: 1
Memory usage: 23%        IP address for eth0: 172.32.0.172
Swap usage: 0%

 * Introducing Expanded Security Maintenance for Applications.
   Receive updates to over 25,000 software packages with your
   Ubuntu Pro subscription. Free for personal use.

   https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

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

Last login: Thu Mar 23 17:28:33 2023 from 157.45.83.199
ubuntu@ip-172-32-0-172:~$ mysql -h database-1.cmiedprvf9.us-east-1.rds.amazonaws.com -P 3306 -u admin -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 31
Server version: 8.0.28 Source distribution

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

mysql> show database
-> ^C
mysql> use blackdata
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> select * from customer;
ERROR 1146 (42S02): Table 'blackdata.customer' doesn't exist
mysql> SELECT customer name, email address FROM customers WHERE city = 'New York';
ERROR 1146 (42S02): Table 'blackdata.customers' doesn't exist
mysql> use blackdata
Database changed
mysql> show databases;
+-----+
| Database |
+-----+
| blackdata |
| information_schema |
| mysql |
| performance_schema |
| sys |
+-----+
5 rows in set (0.00 sec)

mysql>
```