



Connect A Web App with Aurora



Benjamin Kofi Yankey

Sample page

NAME

ADDRESS

ID	NAME	ADDRESS
1	James Mills	100 Examples Street, new York
2	Celine Mills	02 KNUST Lane, San Francisco



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Introducing Today's Project!

What is Amazon Aurora?

Amazon Aurora is a fully managed relational database service from AWS, offering high performance and availability. It scales easily, provides automated backups, and is cost-effective for varying workloads.

How I used Amazon Aurora in this project

In today's project, I used Amazon Aurora by creating a relational database to store data for my web app. I connected it to an EC2 instance, enabling efficient data handling and user interactions.

One thing I didn't expect in this project was...

One thing I didn't expect in this project was how quickly I could set up the Aurora database and connect it to my web app. The seamless integration and performance optimizations were pleasantly surprising!

This project took me...

2 hours



Creating a Web App

```
Administrator@Huey MINGW64 ~/Downloads
$ ssh -i "NextWorkAuroraApp.pem" ec2-user@ec2-3-90-244-96.compute-1.amazonaws.com
, #_
~\ _###_ Amazon Linux 2023
~~ \###\ \
~~ \##|
~~ \#/ __ https://aws.amazon.com/linux/amazon-linux-2023
~~ \V~'`->
~~ /`/ \
~~ /`/ \
/m/ , /
Last login: Mon Oct 14 12:42:23 2024 from 129.122.41.116
[ec2-user@ip-172-31-37-135 ~]$
```

To help me create my web app, I first updated the software on my EC2 instance. Then, I installed Apache (httpd), PHP, the php-mysqli library for MySQL connections, and MariaDB to enable database interactions.

To connect to my EC2 instance, I first set the correct permissions for my key pair with chmod 400 NextWorkAuroraApp.pem. Then, I used the SSH command: ssh -i "NextWorkAuroraApp.pem" ec2-user@ec2-3-90-244-96.compute-1.amazonaws.com for secure access



Connecting my Web App to Aurora

```
ec2-user@ip-172-31-37-135:~/var/www/inc
GNU nano 5.8                               dbInfo.inc                                Modified: a
<?php
define('DB_SERVER', 'nextwork-db-cluster-instance-1.cpa0y62gkt72.us-east-1.rds.amazonaws.com');
define('DB_USERNAME', 'sa_My_Ell123#');
define('DB_PASSWORD', 'sa_My_Ell123#');
define('DB_DATABASE', 'sample');
?>
```

I set up my EC2 instance's connection details to my database by creating a PHP script that includes the database host, username, password, and database name. This configuration allows my web app to communicate with the Aurora database securely.

To connect to my EC2 instance, I first set the correct permissions for my key pair with chmod 400 NextWorkAuroraApp.pem. Then, I used the SSH command: ssh -i "NextWorkAuroraApp.pem" ec2-user@ec2-3-90-244-96.compute-1.amazonaws.com for secure access



My Web App Upgrade

Sample page

NAME	ADDRESS	
<input type="text"/>	<input type="text"/>	
<input type="button" value="Add Data"/>		
ID	NAME	ADDRESS
1	James Mills	100 Examples Street, new York
2	Celine Mills	02 KNUST Lane, San Francisco

Next, I upgraded my web app by enhancing the PHP script to improve user interaction and functionality. I connected it to the Aurora database, allowing for dynamic data retrieval and improved user experience.



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Testing my Web App

To make sure my web app was working correctly, I tested it in the browser and then used the MySQL command-line interface (CLI) to query the Aurora database and verify that the updates were reflected as expected.

```
MySQL [(none)]> USE sample;
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 [sample]> SHOW TABLES;
+-----+
| Tables_in_sample |
+-----+
| EMPLOYEES |
+-----+
1 row in set (0.002 sec)

MySQL [sample]> DESCRIBE EMPLOYEES;
+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra       |
+-----+-----+-----+-----+-----+
| ID    | int unsigned | NO   | PRI | NULL    | auto_increment |
| NAME  | varchar(45)  | YES  |     | NULL    |               |
| ADDRESS | varchar(90) | YES  |     | NULL    |               |
+-----+-----+-----+-----+-----+
3 rows in set (0.005 sec)

MySQL [sample]> SELECT * FROM EMPLOYEES;
+---+-----+-----+
| ID | NAME      | ADDRESS           |
+---+-----+-----+
| 1  | James Mills | 100 Examples Street, new York |
| 2  | Celine Mills | 02 KNUST Lane, San Francisco |
+---+-----+-----+
2 rows in set (0.001 sec)

MySQL [sample]> |
```



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