Steps to followed:

1. Create the database in the AWS console.
2. Launch an EC2 instance
3. Convert a private key to putty using puttygen
4. Install an Apache Web Server with PHP.
5. Set file permissions for the Apache web server.
6. Connect your Apache web server to your database instance.
7. Monitor the Portal using Route 53

# **Create the database in the AWS console.**

**# Launch an EC2 instance**

**# Install an Apache Web Server with PHP**

Step 4: Install an Apache Web Server with PHP 4.1

Get the latest bug fixes and security updates by updating the software on your EC2 Instance. To do this, use the following command:

sudo yum update -y

4.2 Following command installs multiple software packages and related dependencies at the same time.

sudo amazon-linux-extras install php8.0 mariadb10.5

4.3 You can view your version of Amazon Linux with the following command:

cat /etc/system-release

4.4 Install the Apache web server using the following command:

sudo yum install -y httpd

4.5 Start the web server using the following command:

sudo systemctl start httpd

4.6 Configure the web server to start with each system boot using the following command:

sudo chkconfig httpd on

Step 5: Set File Permissions for the Apache Web Server

5.1 Add the www group to EC2 Instance using the following command:

sudo groupadd www

5.2 Add the ec2-user to the www group using the following command:

sudo usermod -a -G www ec2-user

5.3 Log out to refresh your permissions and include the new group using the following command:

Exit

5.5 Check the groups using the following command:

Groups

5.6 Give the ownership of the group /var/www using the following command:

sudo chown -R root:www /var/www

5.7 Change the permissions of the /var/www folder using the following command:

sudo chmod 2775 /var/www

5.8 Give permissions to the directory and files using the following command:

find /var/www -type d -exec sudo chmod 2775 {} +

find /var/www -type f -exec sudo chmod 0664 {} +

Step 6: Connect Your Apache Web Server to your Database Instance

6.1 Change the directory to /var/www and create a new subdirectory named inc with the following command:

cd /var/www

mkdir inc

cd inc

6.2 Create a new file in the inc directory named dbinfo.inc, and then edit the file using the following command:

vim dbinfo.inc

<?php

define('DB\_SERVER','webserver-db.cyf0cij41sjs.us-east-1.rds.amazonaws.com');

define('DB\_USERNAME', 'admin');

define('DB\_PASSWORD', 'admin123');

define('DB\_DATABASE', 'webserverdb');

?>

Change directory to var/www/html using the following command: cd /var/www/html

6.4 Create a new file name as SamplePage.php and add the following code:

vim SamplePage.php

<?php include "../inc/dbinfo.inc"; ?>

<html>

<body>

<h1>Sample page</h1>

<?php

/\* Connect to MySQL and select the database. \*/

$connection = mysqli\_connect(DB\_SERVER, DB\_USERNAME, DB\_PASSWORD);

 if (mysqli\_connect\_errno()) echo "Failed to connect to MySQL: " . mysqli\_connect\_error();

$database = mysqli\_select\_db($connection, DB\_DATABASE);

 /\* Ensure that the EMPLOYEES table exists. \*/ VerifyEmployeesTable($connection, DB\_DATABASE);

 /\* If input fields are populated, add a row to the EMPLOYEES table. \*/

$employee\_name = htmlentities($\_POST['NAME']); $employee\_address = htmlentities($\_POST['ADDRESS']);

if (strlen($employee\_name) || strlen($employee\_address)) { AddEmployee($connection, $employee\_name, $employee\_address);

}

?>

<!-- Input form -->

<form action="<?PHP echo $\_SERVER['SCRIPT\_NAME'] ?>" method="POST">

 <table border="0">

 <tr>

 <td>NAME</td>

 <td>ADDRESS</td>

 </tr>

 <tr>

 <td>

 <input type="text" name="NAME" maxlength="45" size="30" />

 </td>

<td>

 <input type="text" name="ADDRESS" maxlength="90" size="60" />

 </td>

 <td>

 <input type="submit" value="Add Data" />

 </td>

 </tr>

 </table>

</form>

<!-- Display table data. -->

<table border="1" cellpadding="2" cellspacing="2">

 <tr>

 <td>ID</td>

 <td>NAME</td>

 <td>ADDRESS</td>

 </tr>

<?php

$result = mysqli\_query($connection, "SELECT \* FROM EMPLOYEES");

while($query\_data = mysqli\_fetch\_row($result)) {

 echo "<tr>";

 echo "<td>",$query\_data[0], "</td>",

 "<td>",$query\_data[1], "</td>",

 "<td>",$query\_data[2], "</td>";

 echo "</tr>";

}

?>

</table>

<!-- Clean up. -->

<?php

 mysqli\_free\_result($result);

 mysqli\_close($connection);

?>

</body>

</html>

<?php

/\* Add an employee to the table. \*/

function AddEmployee($connection, $name, $address) {

 $n = mysqli\_real\_escape\_string($connection, $name);

 $a = mysqli\_real\_escape\_string($connection, $address);

$query = "INSERT INTO EMPLOYEES (NAME, ADDRESS) VALUES ('$n', '$a');";

 if(!mysqli\_query($connection, $query)) echo("<p>Error adding employee

data.</p>");

}

/\* Check whether the table exists and, if not, create it. \*/

function VerifyEmployeesTable($connection, $dbName) {

 if(!TableExists("EMPLOYEES", $connection, $dbName))

 {

 $query = "CREATE TABLE EMPLOYEES (

 ID int(11) UNSIGNED AUTO\_INCREMENT PRIMARY KEY,

 NAME VARCHAR(45),

 ADDRESS VARCHAR(90)

 )";

if(!mysqli\_query($connection, $query)) echo("<p>Error creating table.</p>");

 }

}

/\* Check for the existence of a table. \*/

function TableExists($tableName, $connection, $dbName) {

 $t = mysqli\_real\_escape\_string($connection, $tableName);

 $d = mysqli\_real\_escape\_string($connection, $dbName);

 $checktable = mysqli\_query($connection,

 "SELECT TABLE\_NAME FROM information\_schema.TABLES WHERE TABLE\_NAME =

'$t' AND TABLE\_SCHEMA = '$d'");

 if(mysqli\_num\_rows($checktable) > 0) return true;

 return false;

}

?>

|  |
| --- |
|  |