

Práctica 2.3



Index

1. Lanzamiento de una instancia EC2 para conectarse con la instancia de base de datos.....	3
2. Crea una base de datos con RDS.....	4
3. Conéctate mediante ssh a la instancia que creamos al inicio.....	5
4. Instala apache2, php y haz al conexión con MariaDB.....	6
5. Cambia la propiedad de grupo del directorio /var/www y su contenido al grupo apache.....	7
6. Crea un directorio en el directorio /var/www, denominado inc y crea un fichero de conexión a la base de datos dentro /var/www/inc llamado dbinfo.inc.....	8
7. Vamos a la carpeta html de var/www y ahí creamos el SamplePage.php.....	9
8. Ver que todo funcione bien.....	10

1. Lanzamiento de una instancia EC2 para conectarse con la instancia de base de datos.

Generate un par de claves y guardatelas.

Llamaré a la instancia ‘MrBabu’:

Name and tags

Name: MrBabu

Application and OS Images (Amazon Machine Image)

Amazon Linux 2023 AMI

Network settings

Network: vpc-0584de5410efb1739

Subnet: No preference (Default subnet in any availability zone)

Auto-assign public IP: Enable

Firewall (security groups): Create security group

We'll create a new security group called 'launch-wizard-0' with the following rules:

- Allow SSH traffic from: My IP (79.117.68.127/32)
- Allow HTTPS traffic from the internet
- Allow HTTP traffic from the internet

Create key pair

Key pair name: BabuKey

Key pair type: RSA (RSA encrypted private and public key pair)

Private key file format: .pem (For use with OpenSSH)

When prompted, store the private key in a secure and accessible location on your computer. You will need it later to connect to your instance.

Cancel Create key pair

2. Crea una base de datos con RDS

Settings

DB Instance Identifier [Info](#)

Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

tutorial-db-instance

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 60 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

▼ Credentials Settings

Master username [Info](#)

Type a login ID for the master user of your DB instance.

tutorial_user

1 to 16 alphanumeric characters. The first character must be a letter.

Credentials management

You can use AWS Secrets Manager or manage your master user credentials.

☐ Managed in AWS Secrets Manager - *most secure*

☒ Self managed

☐ Auto generate password

Amazon RDS can generate a password for you, or you can specify your own password.

Master password [Info](#)

Password strength **Weak**

Minimum constraints: At least 8 printable ASCII characters. Can't contain any of the following symbols: / ' * @

Confirm master password [Info](#)

db.t3.micro

2 vCPUs 1 GiB RAM Network: Up to 2,085 Mbps

Free tier

Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS. [Info](#)

Admin123

Connectivity [Info](#)

Compute resource

Choose whether to set up a connection to a compute resource for this database. Setting up a connection will automatically change connectivity settings so that the compute resource can connect to this database.

☐ Don't connect to an EC2 compute resource

☒ Connect to an EC2 compute resource

EC2 instance [Info](#)

Choose the EC2 instance to add as the compute resource for this database. A VPC security group is added to this EC2 instance. A VPC security group is also added to the database with an inbound rule that allows the EC2 instance to access the database.

I-002870d44f7a65f16

MrBabu

Some VPC settings can't be changed when a compute resource is added

Adding an EC2 compute resource automatically selects the VPC, DB subnet group, and public access settings for this database. To allow the EC2 instance to access the database, a VPC security group rds-ec2-X is added to the database and another called ec2-rds-X to the EC2 instance. You can remove the new security group for the database only by removing the compute resource.

Network type [Info](#)

To use dual-stack mode, make sure that you associate an IPv6 CIDR block with a subnet in the VPC you specify.

☒ IPv4

☐ Dual-stack mode

Virtual private cloud (VPC) [Info](#)

Choose the VPC. The VPC defines the virtual networking environment for this DB instance.

Databases (1)									
<div>Group resources</div> <div>Filter by databases</div> <div>Modify Actions Restore from S3 Create database</div>									
DB identifier	Status	Role	Engine	Region & AZ	Size	Recommendations	CPU	Current	
<input type="radio"/> tutorial-db-instance	Creating	Instance	MariaDB	us-east-1a	db.t3.micro		-		

3. Conéctate mediante ssh a la instancia que creamos al inicio.

The screenshot displays the AWS Management Console interface for a database instance named 'tutorial-db-instance'. The 'Summary' section shows the instance is in a 'Backing-up' status, using the 'db.t3.micro' class in the 'us-east-1a' region. The 'Connectivity & security' tab is active, showing the endpoint 'tutorial-db-instance.cvxnoryf1hab.us-east-1.rds.amazonaws.com' on port '3306'. A red circle highlights the endpoint and port information. Below this, the 'Connect to instance' dialog is open, showing the 'SSH client' tab. It provides instructions on how to connect to the instance using an SSH client, including the command: `ssh -i "BabuKey.pem" ec2-user@ec2-54-159-62-237.compute-1.amazonaws.com`. A terminal window on the right shows the successful execution of this command, displaying the Amazon Linux 2023 login prompt and the last login time.

tutorial-db-instance Refresh Modify Act

Summary

DB Identifier	Status	Role	Engine	Recommendations
tutorial-db-instance	⌚ Backing-up	Instance	MariaDB	
CPU	Class	Current activity	Region & AZ	
16.17%	db.t3.micro		us-east-1a	

Connectivity & security

Endpoint & port

Endpoint: tutorial-db-instance.cvxnoryf1hab.us-east-1.rds.amazonaws.com

Port: 3306

Networking

Availability Zone: us-east-1a

VPC: vpc-0584de5410efb1739

Security

VPC security groups: rds-ec2-1 (sg-0917d358b31487b51)

Publicly accessible: Active

Connect to instance Info

Connect to your instance i-002870d44f7a65f16 (MrBabu) using any of these options

EC2 Instance Connect **Session Manager** **SSH client** **EC2 serial console**

SSH client

You may not be able to connect to this instance as ports 22 may need to be open in order to be accessible. The current associated security groups don't have ports 22 open.

Instance ID: i-002870d44f7a65f16 (MrBabu)

1. Open an SSH client.
2. Locate your private key file. The key used to launch this instance is BabuKey.pem
3. Run this command, if necessary, to ensure your key is not publicly viewable.
`chmod 400 "BabuKey.pem"`
4. Connect to your instance using its Public DNS:
`ec2-54-159-62-237.compute-1.amazonaws.com`

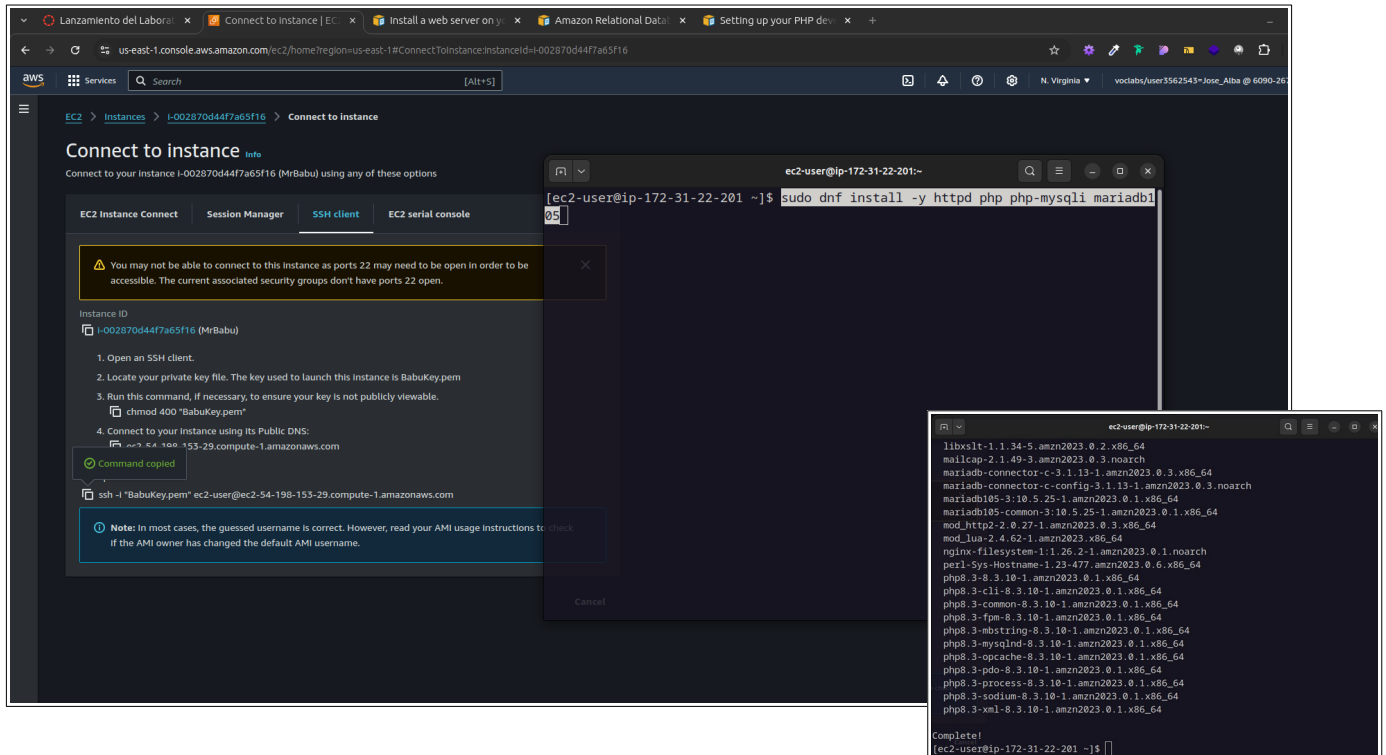
Example:
`ssh -i "BabuKey.pem" ec2-user@ec2-54-159-62-237.compute-1.amazonaws.com`

Note: In most cases, the guessed username is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Terminal Output:

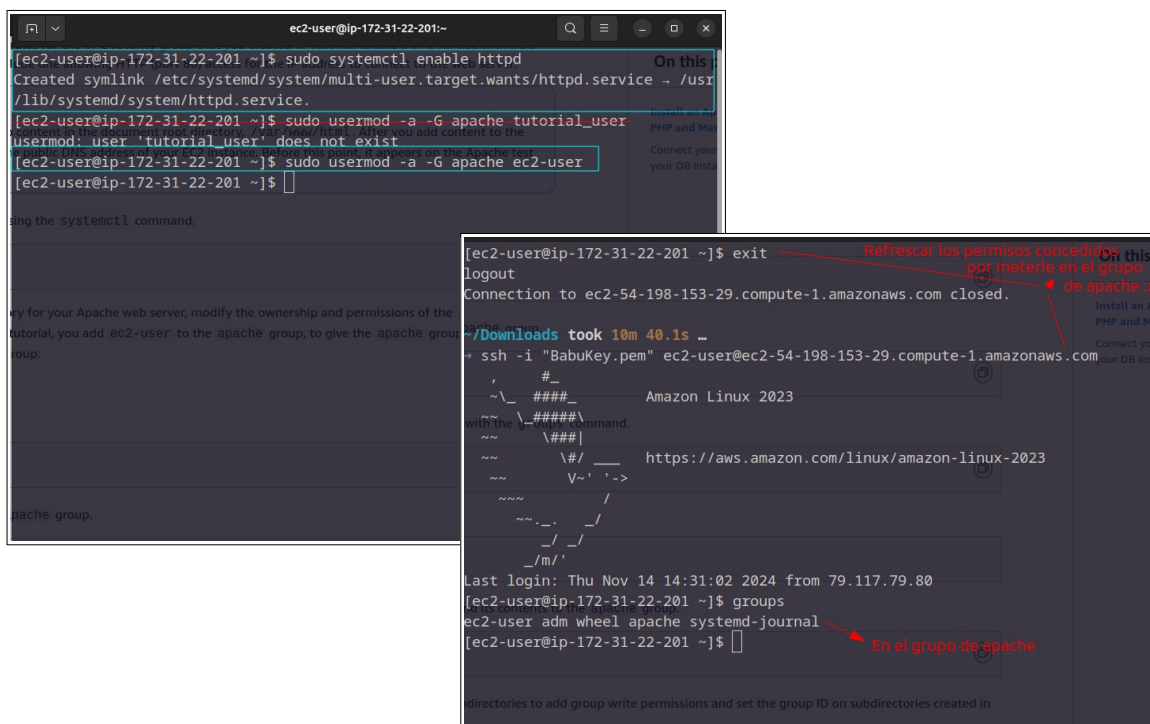
```
~/Downloads ~
→ ssh -i "BabuKey.pem" ec2-user@ec2-54-159-62-237.compute-1.amazonaws.com
_#_
~\_ ##### Amazon Linux 2023
~~~ \#####\
~~~ \###|
~~~ \#/ https://aws.amazon.com/linux/amazon-linux-2023
~~~ V~' ' ->
~~~ _./_ /
~~~ _./_ /
~~~ _./_ /
Last login: Tue Nov 12 15:41:44 2024 from 79.117.82.9
[ec2-user@ip-172-31-22-201 ~]$
```

4. Instala apache2, php y haz al conexión con MariaDB



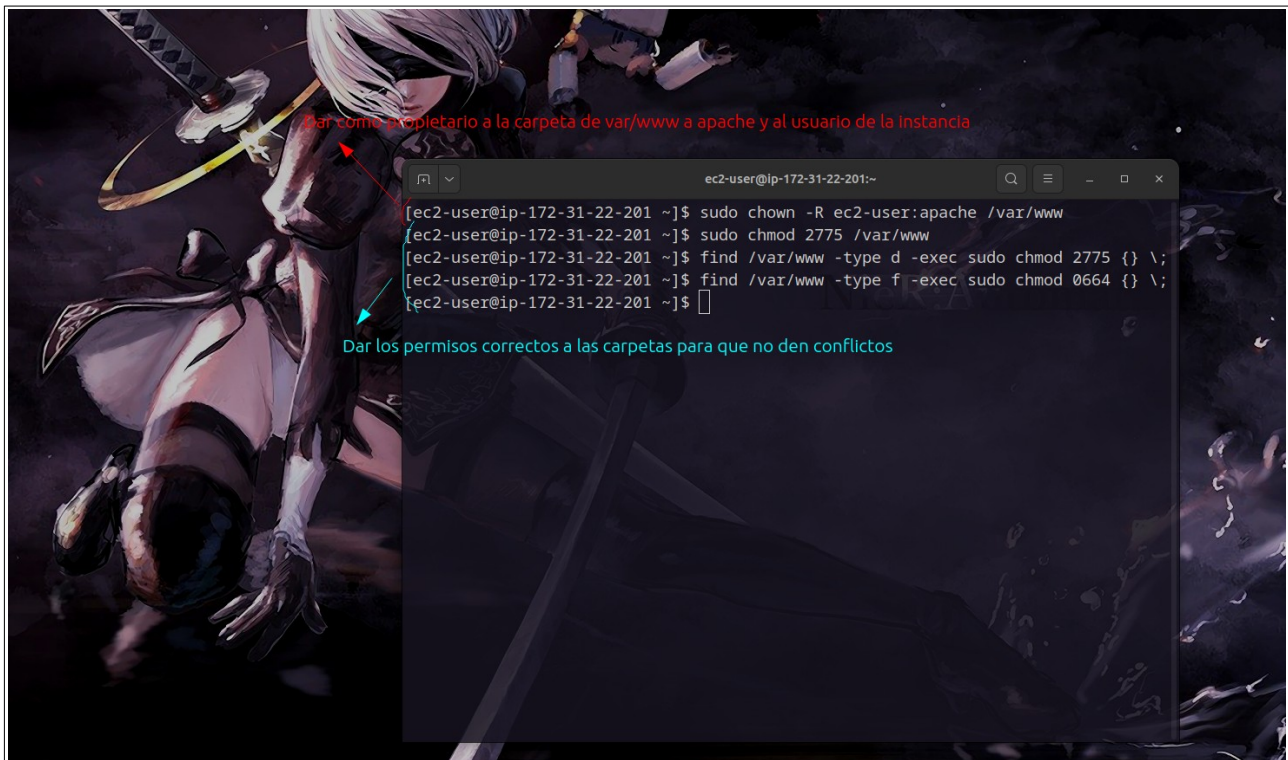
`sudo dnf install -y httpd php php-mysql mariadb105`

No olvidar iniciar el servidor de apache y añadir al grupo de apache al usuario de la instancia:

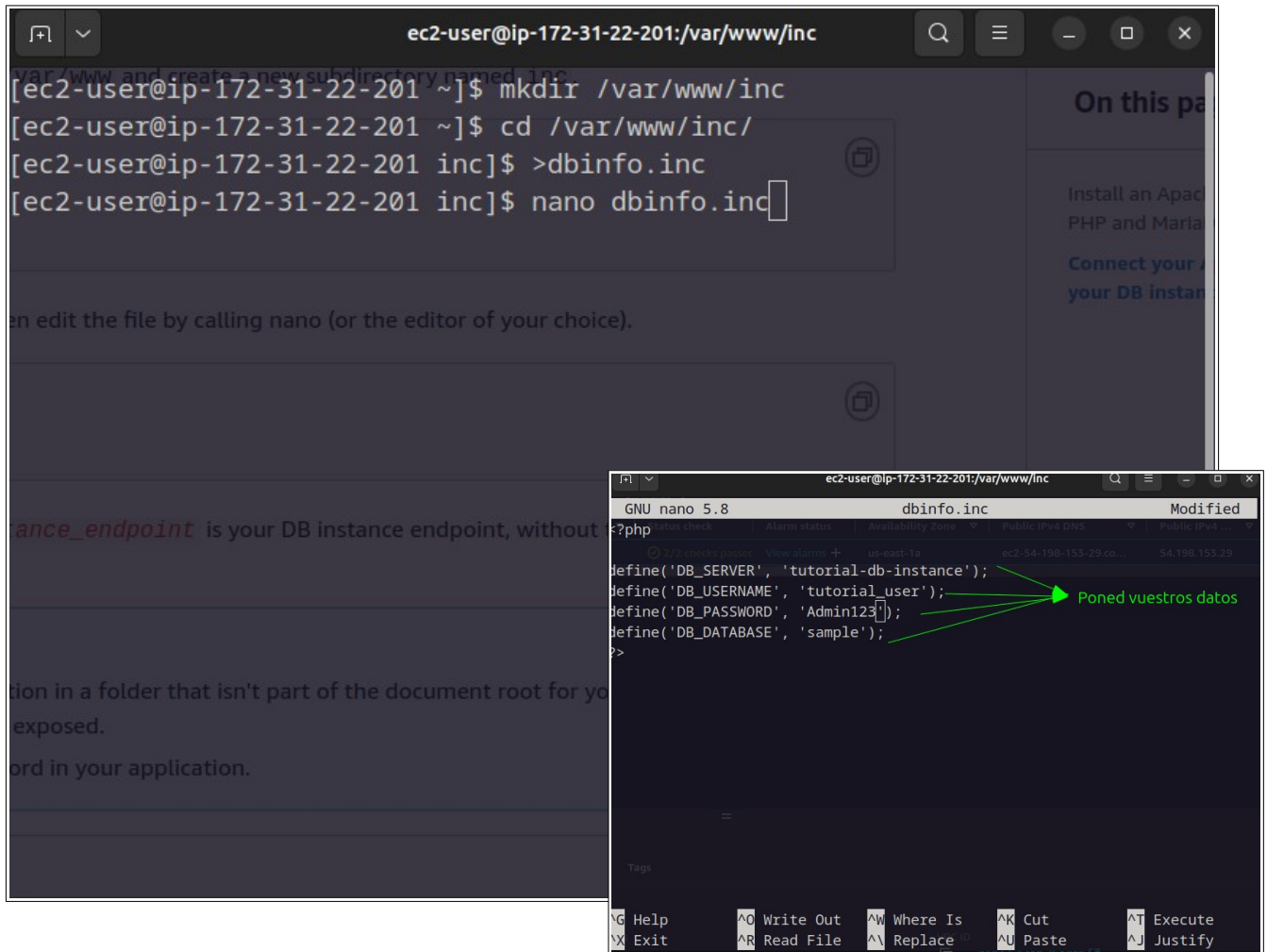


5. Cambia la propiedad de grupo del directorio /var/www y su contenido al grupo apache.

Y también de paso cambiar los permisos del directorio /var/www y sus subdirectorios:



6. Crea un directorio en el directorio /var/www, denominado inc y crea un fichero de conexión a la base de datos dentro /var/www/inc llamado dbinfo.inc



The image consists of two overlapping terminal window screenshots. The top window shows the user creating the directory and file:

```
ec2-user@ip-172-31-22-201:~$ mkdir /var/www/inc
ec2-user@ip-172-31-22-201:~$ cd /var/www/inc/
ec2-user@ip-172-31-22-201:inc$ nano dbinfo.inc
```

The bottom window shows the content of the dbinfo.inc file being edited in nano:

```
GNU nano 5.8 dbinfo.inc
<?php
define('DB_SERVER', 'tutorial-db-instance');
define('DB_USERNAME', 'tutorial_user');
define('DB_PASSWORD', 'Admin123');
define('DB_DATABASE', 'sample');
```

Four green arrows point from the text "Poned vuestros datos" to the values in the define statements: 'tutorial-db-instance', 'tutorial_user', 'Admin123', and 'sample'.

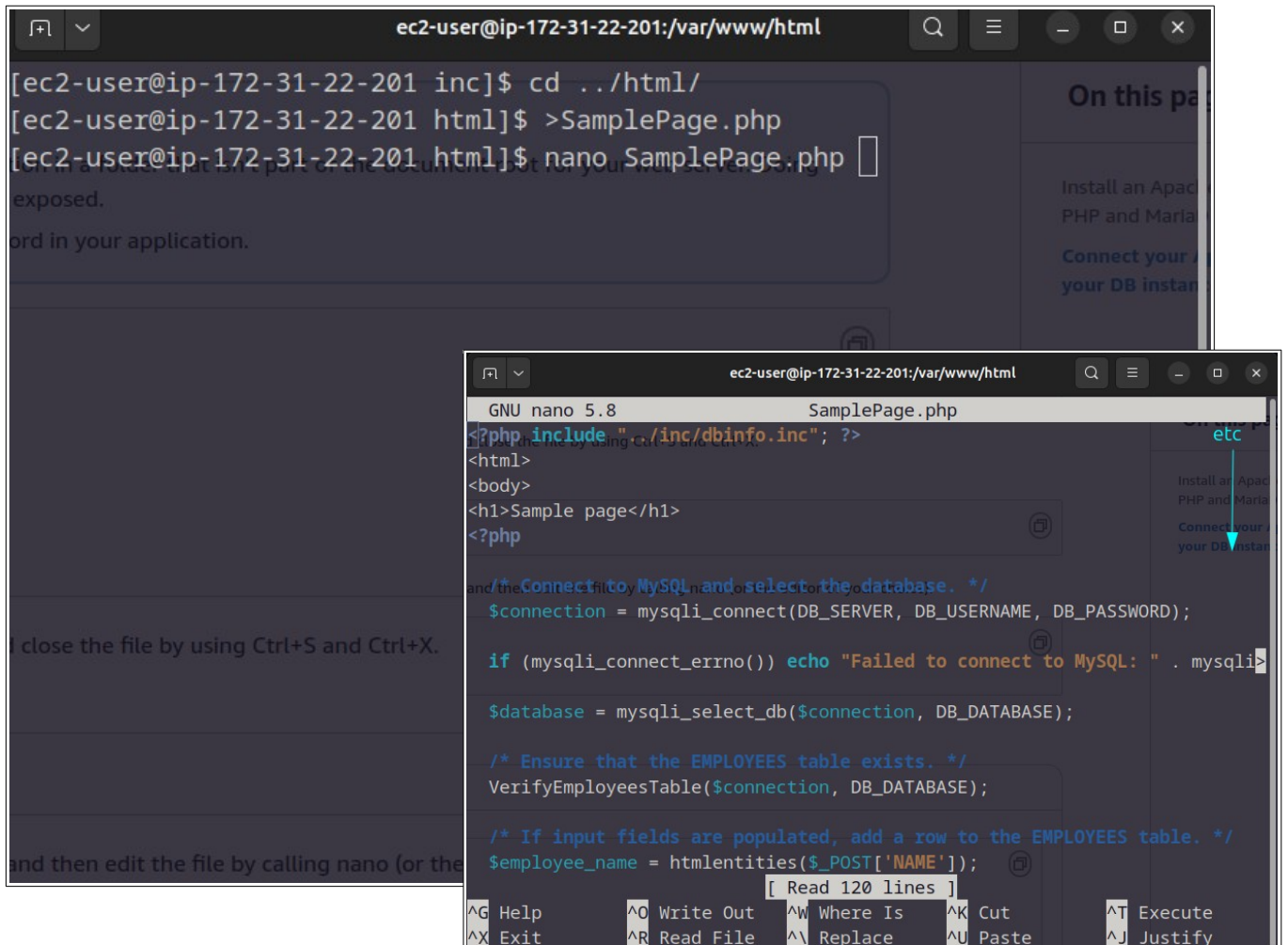
Y al fichero le escupes lo siguiente:

```
<?php
```

```
define('DB_SERVER', 'db_instance_endpoint');
define('DB_USERNAME', 'tutorial_user');
define('DB_PASSWORD', 'master password');
define('DB_DATABASE', 'sample');
?>
```


7. Vamos a la carpeta html de var/www y ahí creamos el SamplePage.php

Ahí copiaremos el contenido del propio archivo SamplePage.php y apartir de ahí veremos si funciona correctamente:



The image shows a terminal window and a nano editor window. The terminal window shows the user navigating to the /var/www/html directory and creating the SamplePage.php file. The nano editor window shows the content of SamplePage.php, which includes a PHP include statement, HTML tags, and PHP code for connecting to a MySQL database and displaying a message.

```
ec2-user@ip-172-31-22-201: /var/www/html
[ec2-user@ip-172-31-22-201 ~]$ cd ../html/
[ec2-user@ip-172-31-22-201 html]$ >SamplePage.php
[ec2-user@ip-172-31-22-201 html]$ nano SamplePage.php

GNU nano 5.8 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_

$database = mysqli_select_db($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']);

[ Read 120 lines ]
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify
```

8. Ver que todo funcione bien

The screenshot displays the AWS Management Console interface for an EC2 instance named 'MrBabu' (ID: i-002870d44f7a65f16). The instance is in a 'Running' state. The 'Networking' tab is selected, showing various network configuration details. A red arrow points to the 'Public IPv4 address' field, which displays '54.198.153.29'. Other fields include 'Private IPv4 addresses' (172.31.22.201), 'VPC ID' (vpc-0584de5410efb1739), and 'Subnet ID' (subnet-049e1752848ab2402). The 'Availability zone' is 'us-east-1a'. The 'Use RBN as guest OS hostname' is disabled. The 'Answer RBN DNS hostname IPv4' is enabled.

Field	Value
Public IPv4 address	54.198.153.29
Private IPv4 addresses	172.31.22.201
VPC ID	vpc-0584de5410efb1739
Subnet ID	subnet-049e1752848ab2402
Availability zone	us-east-1a
Use RBN as guest OS hostname	Disabled
Answer RBN DNS hostname IPv4	Enabled

Al final me da error, miraré de resubir esto (srry, en el momento que escribo esto llevo 1 hora y media frente la pantalla como imbecil haciendo instancias que no puedo conectar ssh y lo más probable esq cuando cree la instancia este obviando alguna tontería que mi cansada mente no esta viendo xD)