



# *Laboratorio 173*

*Solución de problemas de creación de  
una instancia de EC2*

**Hecho con amor por:**

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# Objetivos

- Lanzar una instancia de EC2 mediante la AWS CLI.
- Solucionar problemas con los comandos de AWS CLI y con el servicio Amazon EC2 a través de sugerencias básicas de solución de problemas y la utilidad nmap de código abierto.

# Tarea 1: conectarse a la instancia CLI Host

En esta tarea, utilizaremos EC2 Instance Connect para conectarnos a la instancia EC2 del host CLI que se creó cuando se aprovisionó el laboratorio.

Utilizará esta instancia para ejecutar comandos CLI.

Instances (1/1) [Info](#)

C Connect Instance

Find Instance by attribute or tag (case-sensitive)

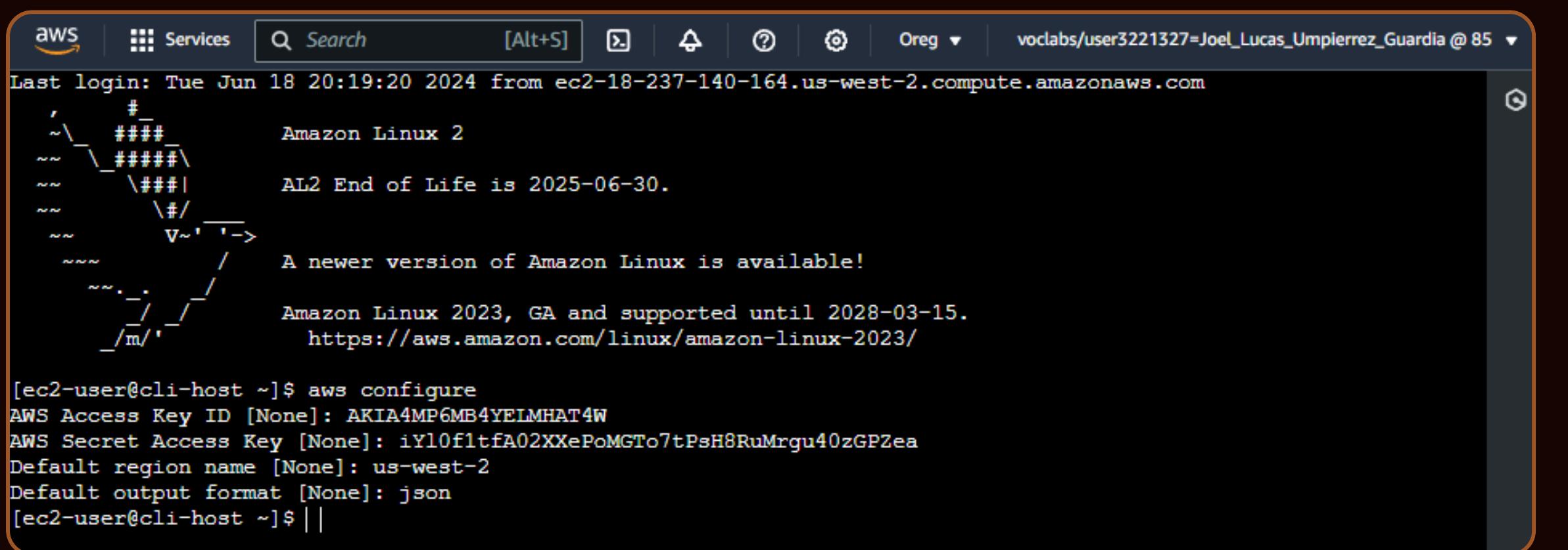
<input checked="" type="checkbox"/>	Name ↴	Instance ID	Instance state
<input checked="" type="checkbox"/>	CLI Host	i-0bb18815c236a52c2	<span>Running</span> <a href="#">Q</a> <a href="#">Q</a>



# Tarea 2: configurar la AWS CLI

En esta tarea, configurarremos la AWS CLI estableciendo los parámetros de configuración que se nos proporcionaron cuando se aprovisionó el laboratorio.

Después de la configuración, ejecutará los comandos de CLI para interactuar con servicios de AWS.



```
Last login: Tue Jun 18 20:19:20 2024 from ec2-18-237-140-164.us-west-2.compute.amazonaws.com
[ec2-user@cli-host ~]$ aws configure
AWS Access Key ID [None]: AKIA4MP6MB4YELMHAT4W
AWS Secret Access Key [None]: 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
Default region name [None]: us-west-2
Default output format [None]: json
[ec2-user@cli-host ~]$ ||
```



# Tarea 3: crear una instancia de EC2 mediante la AWS CLI

En esta tarea, observaremos y ejecutaremos un script de shell, que se le proporcionó, para crear una instancia LAMP de EC2 con comandos de la AWS CLI.

```
Default output format [None]: json
[ec2-user@cli-host ~]$ cd ~/sysops-activity-files/starters
[ec2-user@cli-host starters]$ cp create-lamp-instance-v2.sh create-lamp-instance.backup
```



# *Observamos los detalles del script*

```
[ec2-user@cli-host starters]$ cat create-lamp-instance-userdata-v2.txt
#!/bin/bash
yum -y update
amazon-linux-extras install -y lamp-mariadb10.2-php7.2 php7.2
yum -y install httpd mariadb-server

systemctl enable httpd
systemctl start httpd

systemctl enable mariadb
systemctl start mariadb

echo '<html><h1>Hello From Your Web Server!</h1></html>' > /var/www/html/index.html
find /var/www -type d -exec chmod 2775 {} \;
find /var/www -type f -exec chmod 0664 {} \;
echo "<?php phpinfo(); ?>" > /var/www/html/phpinfo.php

usermod -a -G apache ec2-user
chown -R ec2-user:apache /var/www
chmod 2775 /var/www

#Check /var/log/cloud-init-output.log after this runs to see errors, if any.

#
# Download and unzip the Cafe application files.
#
# Database scripts
wget https://aws-tc-largeobjects.s3.amazonaws.com/CUR-TF-100-RESTRT-1/173-activity-JAWS-troubleshoot-instance/db-v2.tar.gz
tar -zxvf db-v2.tar.gz

# Web application files
wget https://aws-tc-largeobjects.s3.amazonaws.com/CUR-TF-100-RESTRT-1/173-activity-JAWS-troubleshoot-instance/cafe-v2.tar.gz
tar -zxvf cafe-v2.tar.gz -C /var/www/html/

#
# Run the scripts to set the database root password, and create and populate the application database.
# Check the following logs to make sure there are no errors:
#
#      /db/set-root-password.log
#      /db/create-db.log
#
cd db
./set-root-password.sh
./create-db.sh
hostnamectl set-hostname web-server
[ec2-user@cli-host starters]$ █
```

# *Intentamos ejecutar el script*

```
[ec2-user@cli-host starters]$ ./create-lamp-instance-v2.sh  
  
Running create-instance.sh on 2024-06-18 20:35:33  
  
Instance Type: t3.small  
Profile: default  
  
Looking up account values....
```

```
VPC: vpc-06dd990d11531c3e7  
Region: us-west-2  
VPC: vpc-06dd990d11531c3e7  
Subnet Id: subnet-06142927d7f727896  
Key: vockey  
AMI ID: ami-0acb9a8339ab465bd
```

```
Creating a new security group....  
Security Group: sg-0f12d80946f6ffee9
```

```
Opening port 22 in the new security group  
Opening port 80 in the new security group
```

```
Creating an EC2 instance in us-west-2
```

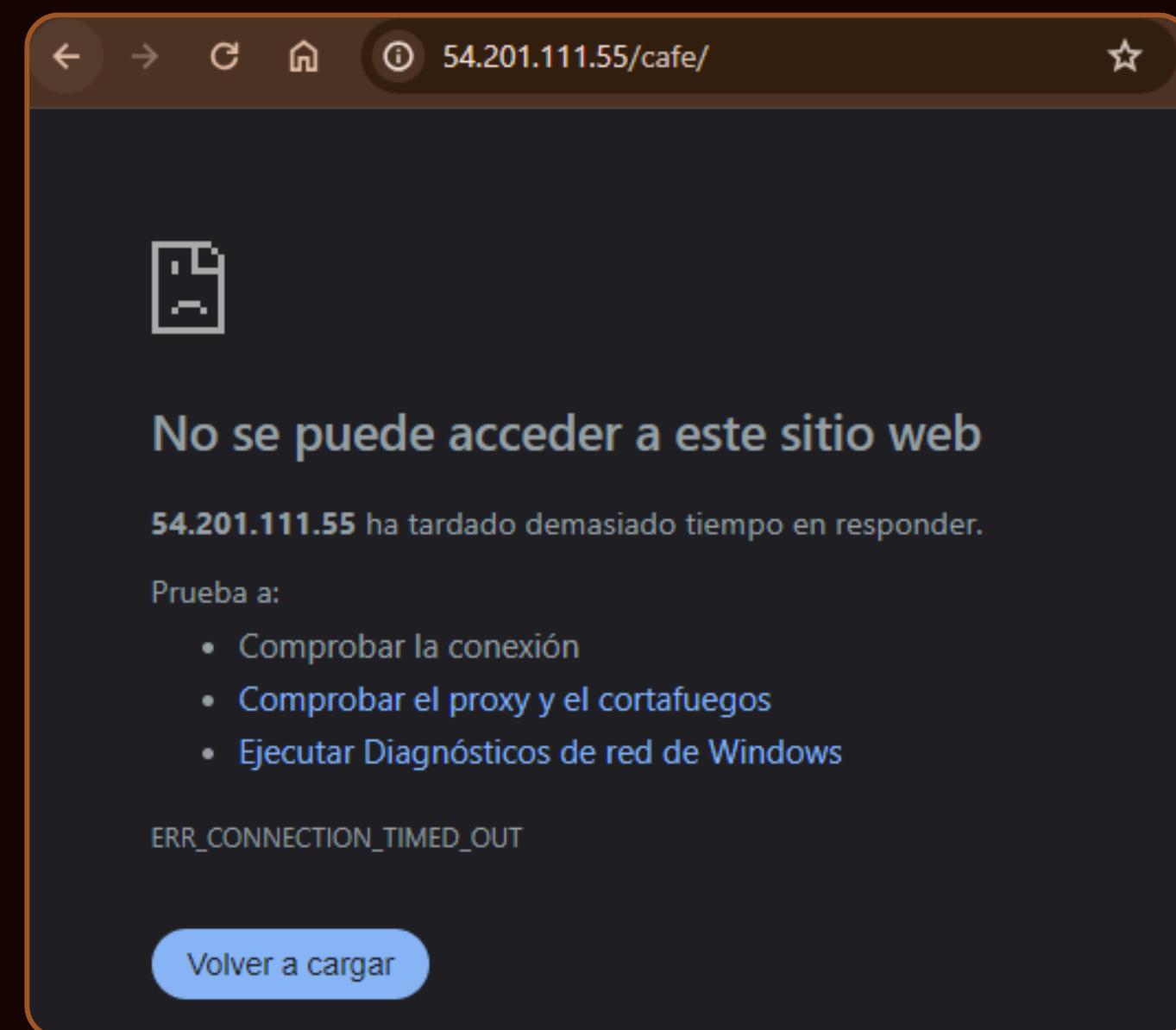
```
An error occurred (InvalidAMIID.NotFound) when calling the RunInstances operation: The image id '[ami-0acb9a8339ab465bd]' does not exist  
[ec2-user@cli-host starters]$
```

# Solucionamos el primer problema

```
An error occurred (InvalidAMIID.NotFound)  
ab465bd]' does not exist  
[ec2-user@cli-host starters]$
```

```
echo  
echo "Creating an EC2 instance in \"$region"  
instanceDetails=$(aws ec2 run-instances \  
--image-id $imageId \  
--count 1 \  
--instance-type $instanceType \  
--region us-east-1 → | us-west-2 \  
--subnet-id $subnetId \  
--security-group-ids $securityGroup \  
--tag-specifications 'ResourceType=instance,Tags=[{Key=Name,Value=cafeserver}]' \  
--associate-public-ip-address \  
--iam-instance-profile Name=LabInstanceProfile \  
--profile $profile \  
--user-data file://create-lamp-instance-userdata-v2.txt \  
--key-name $key )
```

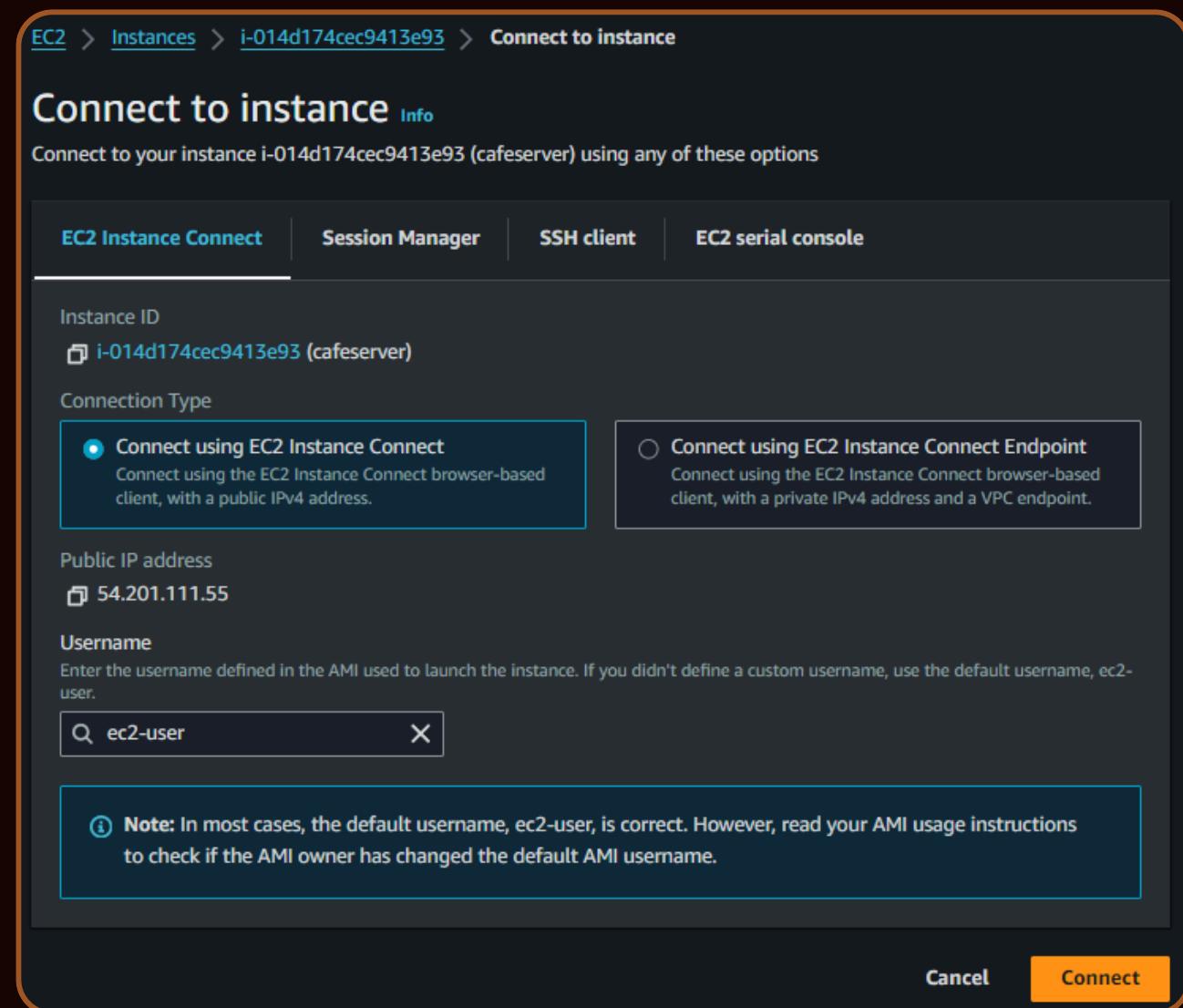
```
[ec2-user@cli-host starters]$ ./create-lamp-instance-v2.sh  
Running create-instance.sh on 2024-06-18 20:49:54  
  
Instance Type: t3.small  
Profile: default  
  
Looking up account values...  
  
VPC: vpc-06dd990d11531c3e7  
Region: us-west-2  
VPC: vpc-06dd990d11531c3e7  
Subnet Id: subnet-06142927d7f727896  
Key: vokey  
AMI ID: ami-0acb9a8339ab465bd  
  
WARNING: Found existing security group with name sg-0f12d80946f6ffee9.  
This script will not succeed if it already exists.  
Would you like to delete it? [Y/N]  
>>  
Y  
  
Deleting the existing security group...  
  
Creating a new security group...  
Security Group: sg-0086b76d13f3d9232  
  
Opening port 22 in the new security group  
Opening port 80 in the new security group  
  
Creating an EC2 instance in us-west-2  
  
Instance Details....
```



```
{  
instanceId=i-014d174cec9413e93  
  
Waiting for a public IP for the new instance...  
  
The public IP of your LAMP instance is: 54.201.111.55  
  
Download the Key Pair from the Vocareum page.  
  
Then connect using this command (with .pem or .ppk added to the end of the keypair name):  
ssh -i path-to/vokey ec2-user@54.201.111.55  
  
The website should also become available at  
http://54.201.111.55/cafe/  
  
Done running create-instance.sh at 2024-06-18 20:51:09
```

*El script funciona  
pero la página web  
no carga.*

# Solucionamos el segundo problema



```
ec2-user@web-server ~$ nmap -Pn 54.201.111.55
Starting Nmap 6.40 ( http://nmap.org ) at 2024-06-18 21:01 UTC
Nmap scan report for ec2-54-201-111-55.us-west-2.compute.amazonaws.com (54.201.111.55)
Host is up (0.00030s latency).
Not shown: 998 filtered ports
PORT      STATE SERVICE
22/tcp    open  ssh
8080/tcp  closed http-proxy

Nmap done: 1 IP address (1 host up) scanned in 4.94 seconds
ec2-user@web-server ~$
```

```
[ec2-user@cli-host starters]$ sudo yum install -y nmap
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
Resolving Dependencies
--> Running transaction check
--> Package nmap.x86_64 2:6.40-19.amzn2.0.1 will be installed
--> Processing Dependency: nmap-ncat = 2:6.40-19.amzn2.0.1 for package: 2:nmap-6.40-19.amzn2.0.1.x86_64
--> Running transaction check
--> Package nmap-ncat.x86_64 2:6.40-19.amzn2.0.1 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

Transaction Summary
Install  1 Package (+1 Dependent package)

Total download size: 4.2 M
Installed size: 16 M
Downloading packages:
(1/2): nmap-ncat-6.40-19.amzn2.0.1.x86_64.rpm           | 204 kB  00:00:00
(2/2): nmap-6.40-19.amzn2.0.1.x86_64.rpm                | 4.0 MB  00:00:00
Total                                         21 MB/s | 4.2 MB  00:00:00
21 MB/s | 4.2 MB  00:00:00

Running transaction check
Running transaction test
transaction test succeeded
Running transaction
  Installing : 2:nmap-ncat-6.40-19.amzn2.0.1.x86_64          1/2
  Installing : 2:nmap-6.40-19.amzn2.0.1.x86_64             2/2
  Verifying   : 2:nmap-6.40-19.amzn2.0.1.x86_64          1/2
  Verifying   : 2:nmap-ncat-6.40-19.amzn2.0.1.x86_64        2/2

Installed:
  nmap.x86_64 2:6.40-19.amzn2.0.1

Dependency Installed:
  nmap-ncat.x86_64 2:6.40-19.amzn2.0.1

Complete!
[ec2-user@cli-host starters]$
```

```
[ec2-user@cli-host starters]$ nmap -Pn 54.201.111.55
Starting Nmap 6.40 ( http://nmap.org ) at 2024-06-18 21:01 UTC
Nmap scan report for ec2-54-201-111-55.us-west-2.compute.amazonaws.com (54.201.111.55)
Host is up (0.00030s latency).
Not shown: 998 filtered ports
PORT      STATE SERVICE
22/tcp    open  ssh
8080/tcp  closed http-proxy

Nmap done: 1 IP address (1 host up) scanned in 4.94 seconds
[ec2-user@cli-host starters]$
```

```

echo "Opening port 80 in the new security group"
aws ec2 authorize-security-group-ingress \
--group-id $securityGroup \
--protocol tcp \
--port 8080 →
--cidr 0.0.0.0/0 \
--region $region \
--profile $profile

```



*Arreglamos el bug:  
se estaba abriendo  
otro puerto.*

```

[ec2-user@cli-host starters]$ ./create-lamp-instance-v2.sh
Running create-instance.sh on 2024-06-18 21:13:13
Instance Type: t3.small
Profile: default
Looking up account values...
VPC: vpc-06dd990d11531c3e7
Region: us-west-2
VPC: vpc-06dd990d11531c3e7
Subnet Id: subnet-06142927d7f727896
Key: vockey
AMI ID: ami-0acb9a8339ab465bd
WARNING: Found existing running EC2 instance with instance ID i-014d174cec9413e93.
This script will not succeed if it already exists.
Would you like to delete it? [Y/N]
>>
Y
Deleting the existing instance...
{
  "TerminatingInstances": [
    {
      "InstanceId": "i-014d174cec9413e93",
      "CurrentState": {
        "Code": 32,
        "Name": "shutting-down"
      },
      "PreviousState": {
        "Code": 16,
        "Name": "running"
      }
    }
  ]
}

WARNING: Found existing security group with name sg-0086b76d13f3d9232.
This script will not succeed if it already exists.
Would you like to delete it? [Y/N]
>>
Y
Deleting the existing security group...
Creating a new security group...
Security Group: sg-049a186e637fcd4ba
Opening port 22 in the new security group
Opening port 80 in the new security group

```

```
Opening port 80 in the new security group  
Creating an EC2 instance in us-west-2  
Instance Details...  
{  
}  
instanceId=i-0df7ca79b03ed10b4  
  
Waiting for a public IP for the new instance...  
The public IP of your LAMP instance is: 35.91.197.104  
Download the Key Pair from the Vocareum page.  
  
Then connect using this command (with .pem or .ppk added to the end of the keypair name):  
ssh -i path-to/vockey ec2-user@35.91.197.104  
  
The website should also become available at  
http://35.91.197.104/cafe/  
  
Done running create-instance.sh at 2024-06-18 21:16:07
```

Name	Instance ID	Instance state
cafeserver	i-014d174cec9413e93	Terminated
cafeserver	i-0df7ca79b03ed10b4	Running
CLI Host	i-0bb18815c236a52c2	Running

```
[ec2-user@web-server ~]$ sudo tail -f /var/log/cloud-init-output.log  
cafe/serverInfo.php  
  
Set Root Password script completed.  
Please check the set-root-password.log file to verify successful execution.  
  
Create Database script completed.  
Please check the create-db.log file to verify successful execution.  
  
Cloud-init v. 19.3-46.amzn2.0.2 finished at Tue, 18 Jun 2024 21:17:05 +0000. Datasource DataSourceEc2. Up 63.  
32 seconds
```

*Corremos el script nuevamente,  
ahora con el puerto solucionado*

```
[ec2-user@web-server ~]$ sudo tail -f /var/log/cloud-init-output.log
cafe/serverInfo.php

Set Root Password script completed.
Please check the set-root-password.log file to verify successful execution.

Create Database script completed.
Please check the create-db.log file to verify successful execution.

Cloud-init v. 19.3-46.amzn2.0.2 finished at Tue, 18 Jun 2024 21:17:05 +0000. Datasource DataSourceEc2. Up 63.
32 seconds
^C
[ec2-user@web-server ~]$ sudo cat /var/log/cloud-init-output.log
Cloud-init v. 19.3-46.amzn2.0.2 running 'init-local' at Tue, 18 Jun 2024 21:16:07 +0000. Up 4.80 seconds.
Cloud-init v. 19.3-46.amzn2.0.2 running 'init' at Tue, 18 Jun 2024 21:16:08 +0000. Up 6.10 seconds.
ci-info: ++++++Net device info+++++
ci-info: +-----+
ci-info: | Device | Up | Address | Mask | Scope | Hw-Address |
ci-info: +-----+
ci-info: | eth0 | True | 10.200.0.33 | 255.255.255.0 | global | 02:88:6c:78:1d:13 |
ci-info: | eth0 | True | fe80::88:6cff:fe78:1d13/64 | . | link | 02:88:6c:78:1d:13 |
ci-info: | lo | True | 127.0.0.1 | 255.0.0.0 | host | . |
ci-info: | lo | True | ::1/128 | . | host | . |
ci-info: +-----+
ci-info: +++++Route IPv4 info+++++
ci-info: +-----+
ci-info: | Route | Destination | Gateway | Genmask | Interface | Flags |
ci-info: +-----+
ci-info: | 0 | 0.0.0.0 | 10.200.0.1 | 0.0.0.0 | eth0 | UG |
ci-info: | 1 | 10.200.0.0 | 0.0.0.0 | 255.255.255.0 | eth0 | U |
ci-info: | 2 | 169.254.169.254 | 0.0.0.0 | 255.255.255.255 | eth0 | UH |
ci-info: +-----+
ci-info: +++++Route TDWC info+++++
```

```
Set Root Password script completed.
Please check the set-root-password.log file to verify successful execution.
```

```
Create Database script completed.
Please check the create-db.log file to verify successful execution.

Cloud-init v. 19.3-46.amzn2.0.2 finished at Tue, 18 Jun 2024 21:17:05 +0000. Datasource DataSourceEc2. Up 63.
32 seconds
[ec2-user@web-server ~] $ |
```

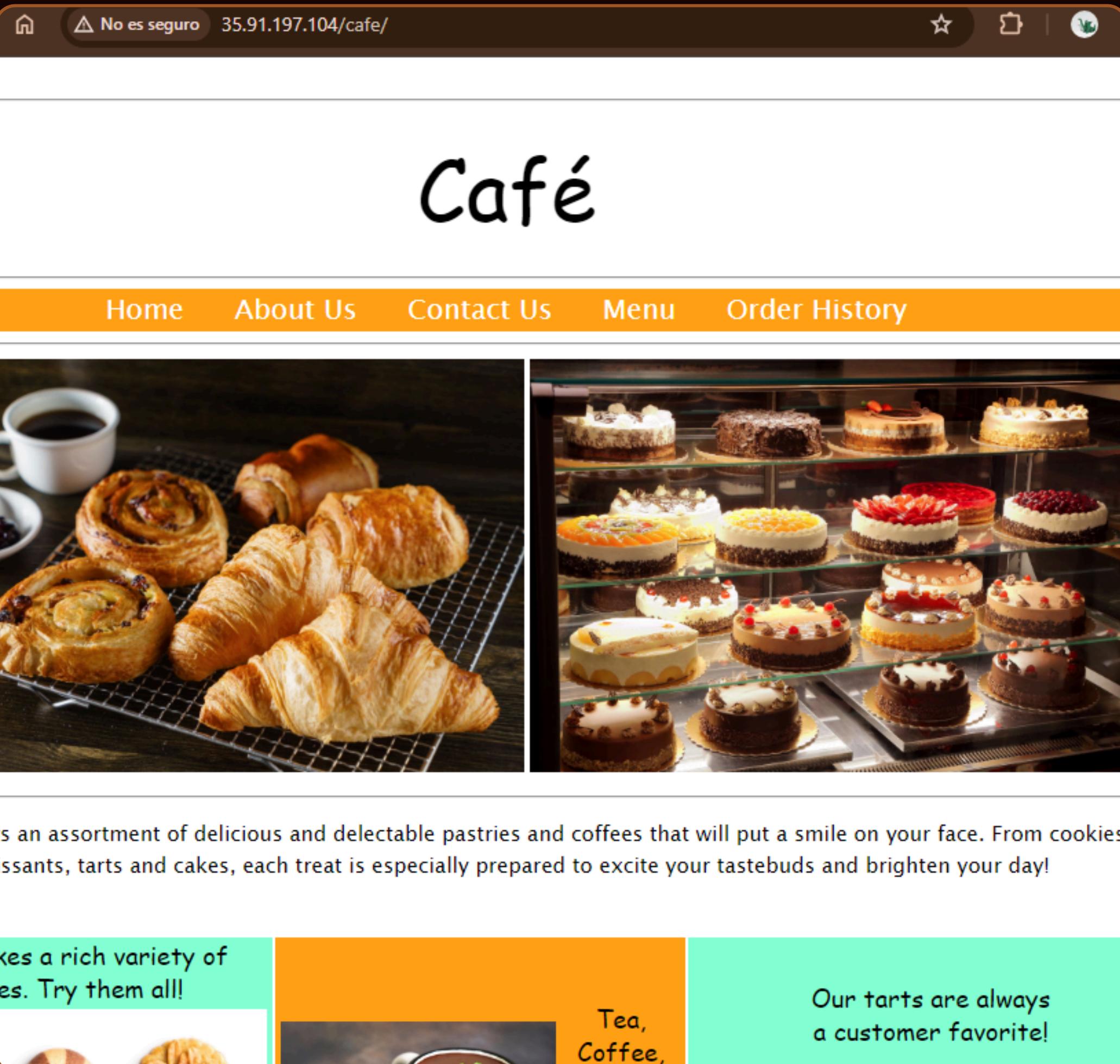
*Verificamos el archivo de registro que muestra si el script de datos de usuario se ejecutó como se esperaba.*

# Tarea 4: verificar la funcionalidad del sitio web

En esta tarea, verificaremos que el sitio web se encuentre implementado.

The website should also become available at  
<http://35.91.197.104/cafe/>



A screenshot of a web browser displaying a cafe website. The title "Café" is prominently displayed at the top. A navigation bar below it includes links for Home, About Us, Contact Us, Menu, and Order History. Two large images are shown: one on the left featuring a variety of baked goods like croissants and swirl buns, and another on the right showing a display case filled with numerous small, decorated cakes and tarts. Below these images, there is descriptive text about the cafe's offerings and a call-to-action button.

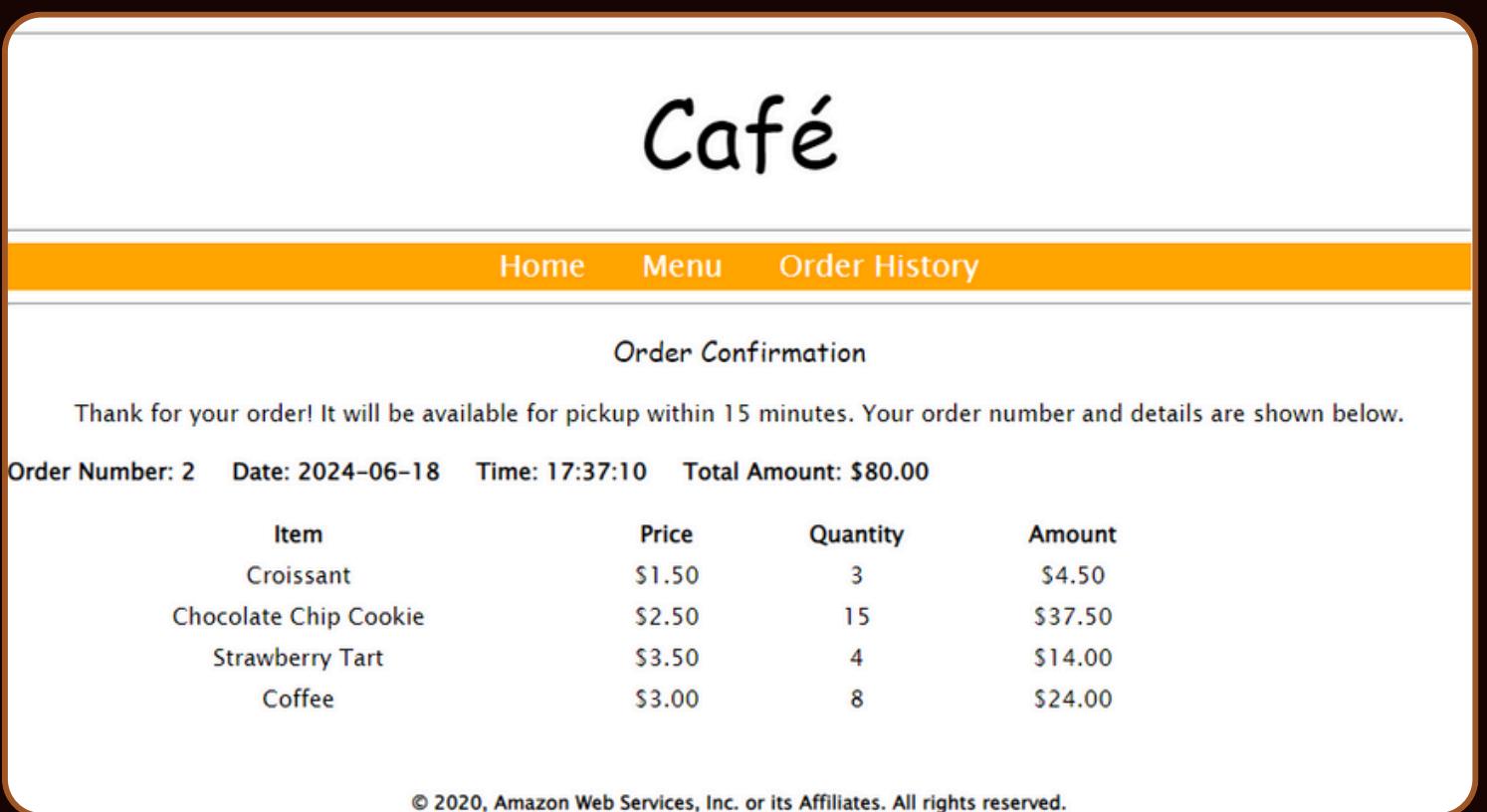
an assortment of delicious and delectable pastries and coffees that will put a smile on your face. From cookies to croissants, tarts and cakes, each treat is especially prepared to excite your tastebuds and brighten your day!

akes a rich variety of es. Try them all!

Tea, Coffee,

Our tarts are always a customer favorite!

*Visualizamos nuestra  
página y hacemos  
una orden.*

A screenshot of an order confirmation page titled "Café". It features a navigation bar with Home, Menu, and Order History. The main content area is titled "Order Confirmation" and contains a message of thanks. Below this, it shows the order number, date, time, and total amount. A table then lists the items ordered with their respective prices, quantities, and amounts.

Order Confirmation

Thank for your order! It will be available for pickup within 15 minutes. Your order number and details are shown below.

Order Number: 2 Date: 2024-06-18 Time: 17:37:10 Total Amount: \$80.00

Item	Price	Quantity	Amount
Croissant	\$1.50	3	\$4.50
Chocolate Chip Cookie	\$2.50	15	\$37.50
Strawberry Tart	\$3.50	4	\$14.00
Coffee	\$3.00	8	\$24.00

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# Muchas Gracias

**CAFECITO000**

