Carla Cuéllar Franco

Actividad

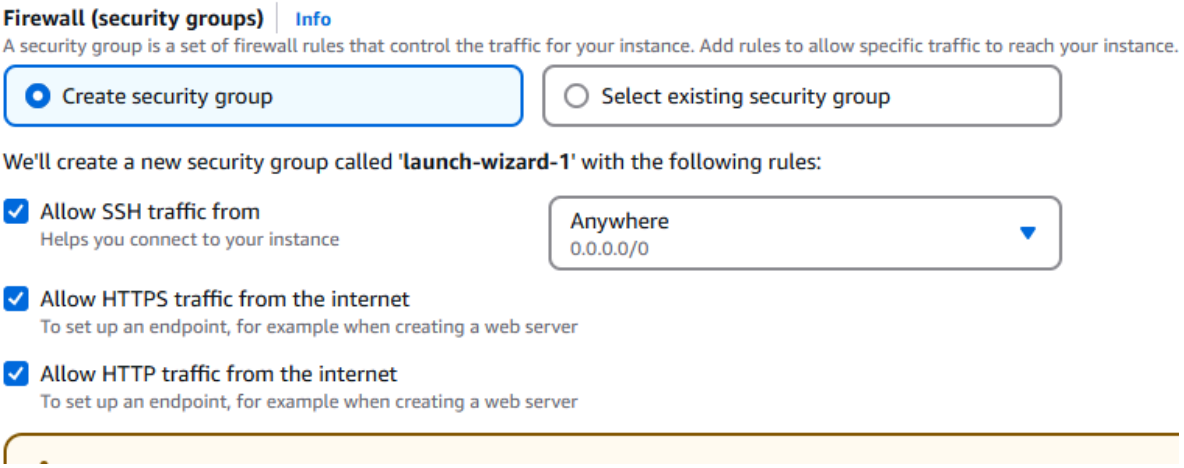
Objetivo: Asociar un certificado https al servidor apache de una instancia EC2. Esta instancia formará parte de un target group y un load balancer.

Servicios:

- EC2
- ACM (Amazon Certificate Manager)
- ELB (Elastic Load Balancer)

Procedimiento:

Crear una instancia EC2 con Apache

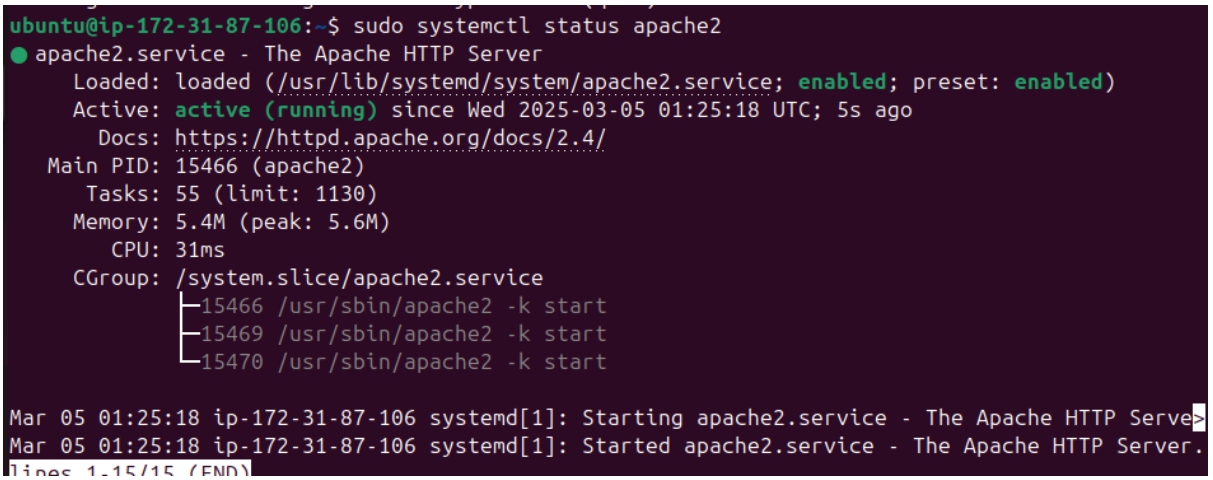


Iniciar sesión en la ec2
Una vez dentro de la ec2 instalamos apache.

```
sudo apt update
sudo apt install -y apache2 \
        ghostscript \
        libapache2-mod-php \
        mysql-client \
        php \
        php-bcmath \
        php-curl \
        php-imagick \
        php-intl \
        php-json \
        php-mbstring \
```

php-mysql \
php-xml \
php-zip

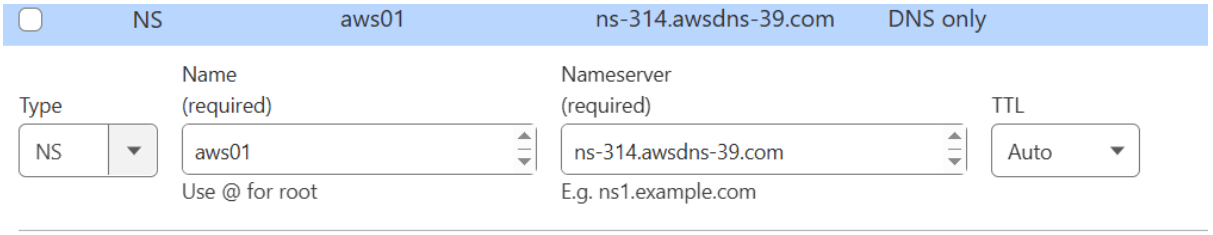
Verificamos:
sudo systemctl status apache2



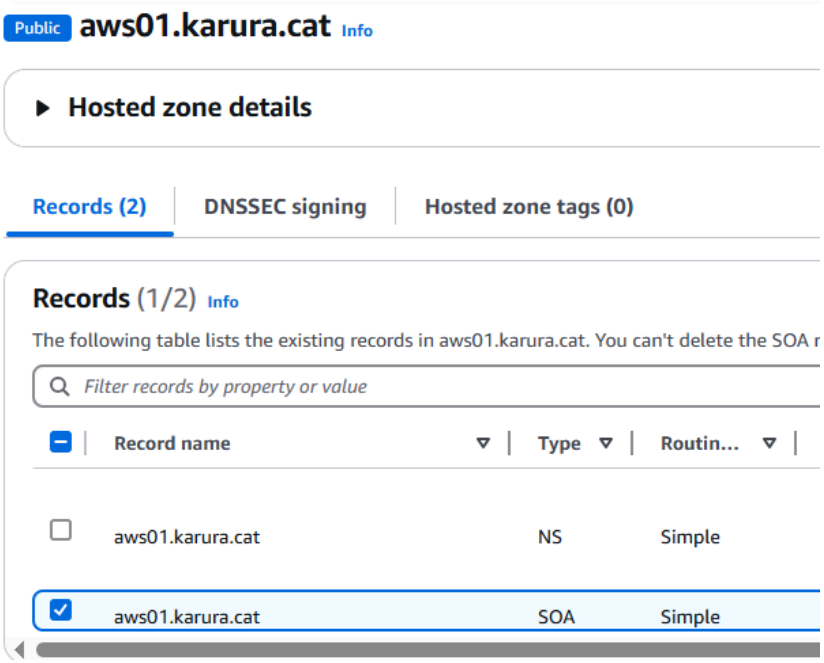
Crear una página de prueba:
sudo echo "<h1>Hola, este es mi servidor Apache</h1>" | sudo tee /var/www/html/index.html

Solicitar un certificado SSL con ACM

Pasos previos:
Configurar DNS cloudflare



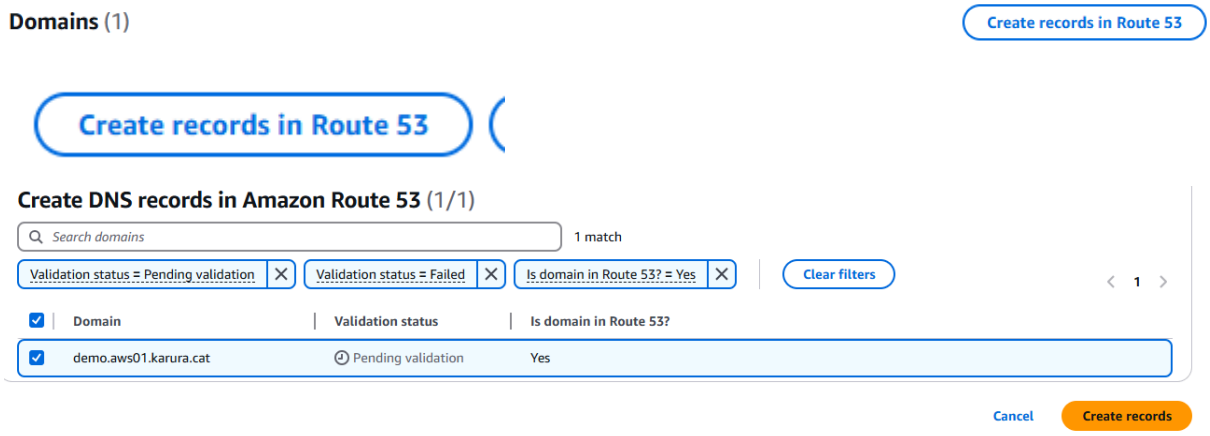
Configurar Router 53 nombre de dominio



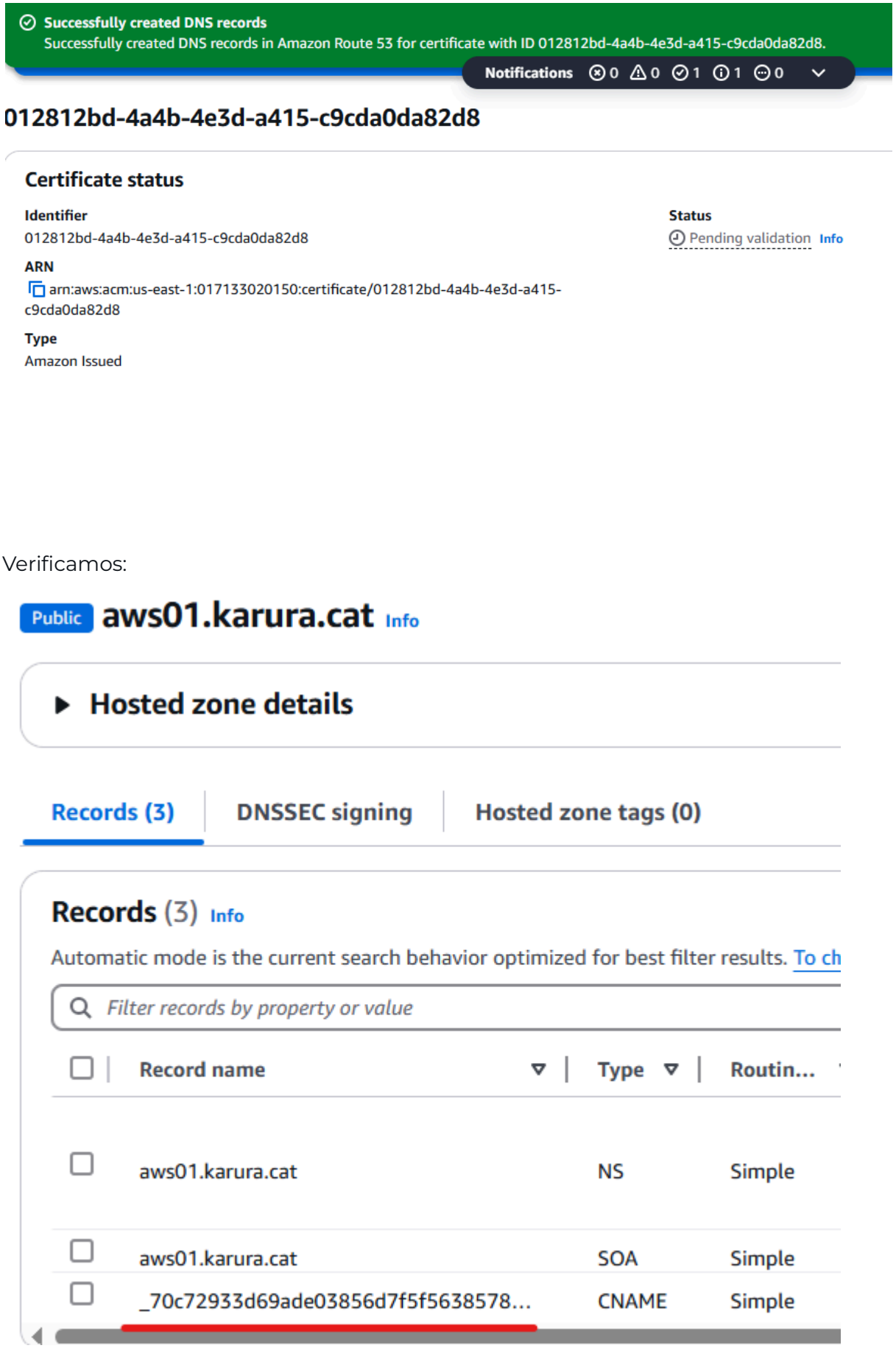
ns-314.awsdns-39.com. awsdns-hostmaster.amazon.com. 1 7200 900 1209600 86400

Solicitar el certificado

El mensaje azul indica que ACM pedirá que validemos el dominio. Usamos Route 53, por lo tanto hacemo clic en Create records in Route 53 para validar automáticamente.



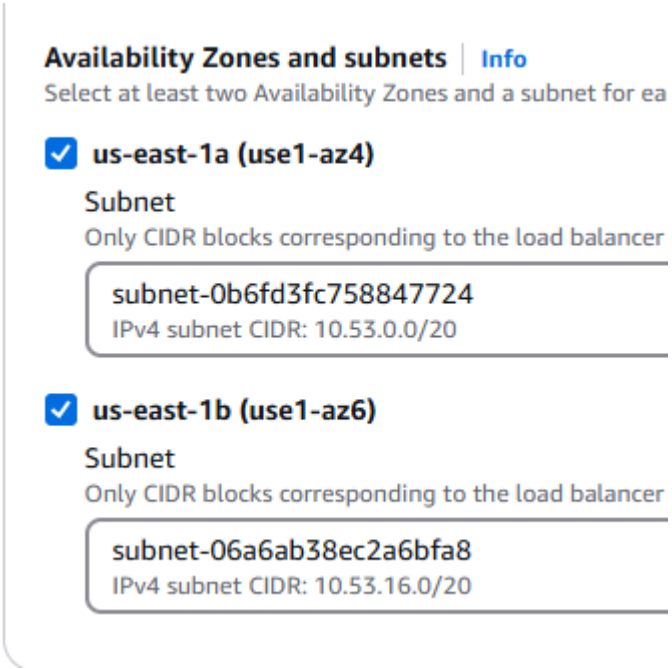
Listo:



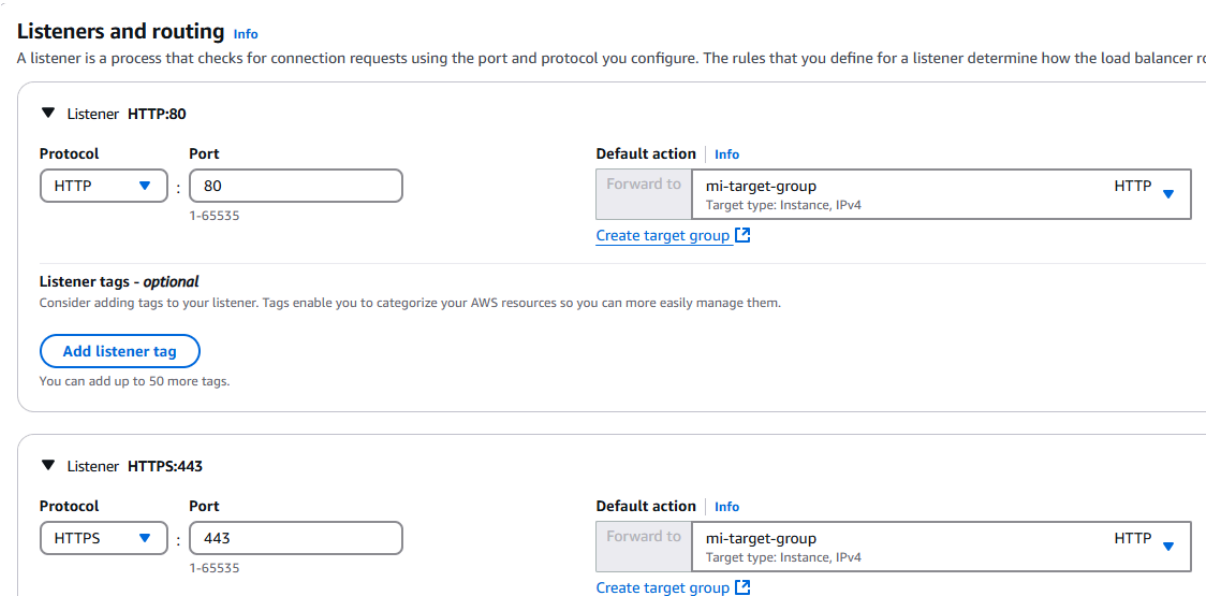
Verificamos:

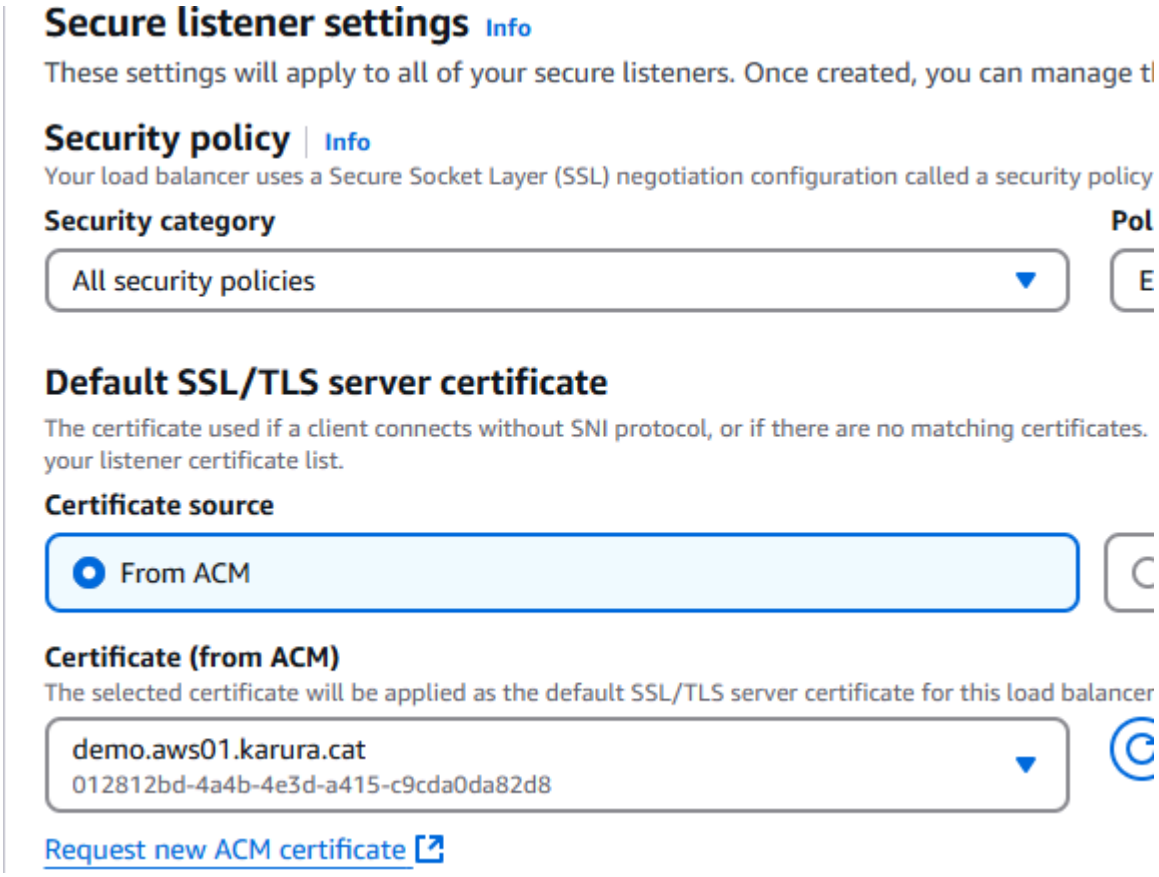
Crear un Load Balancer

El objetivo es usar el certificado SSL que solicitó en ACM para habilitar HTTPS en su servidor Apache. Sin embargo, ACM no permite descargar directamente el certificado y la clave privada. En su lugar, debemos usar el certificado a través del Load Balancer (ALB), que ya está configurado para manejar HTTPS.

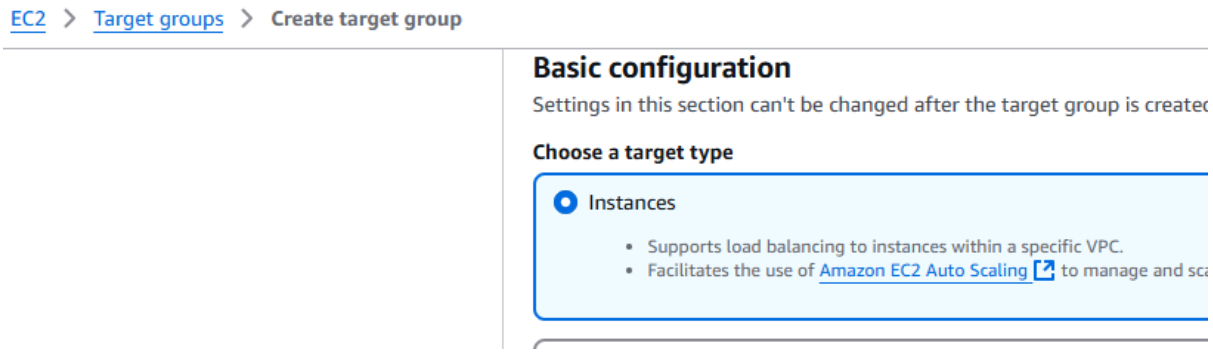


Configurar el certificado SSL:
En el listener de HTTPS (puerto 443), selecciona el certificado que solicitaste en ACM.





Crear un Target Group:
En la sección Target Groups, crea un nuevo grupo:
Name: Ponle un nombre (por ejemplo, mi-target-group).
Target type: Selecciona Instance.
Protocol: HTTP.
Port: 80.
Registra tu instancia EC2 en el target group.



Target group name

mi-target-group

A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Protocol : Port

Choose a protocol for your target group that corresponds to the Load Balancer type that will route traffic to it. Some protocols now include anomaly
created. This choice cannot be changed after creation

HTTP

80

1-65535

Register targets

This is an optional step to create a target group. However, to ensure that your load balancer routes traffic to this target group you must register yo

Available instances (1/1)

Filter instances

Instance ID	Name	State	Security groups
i-085574563b223d7e4	test	Running	activiadad 80 y 443

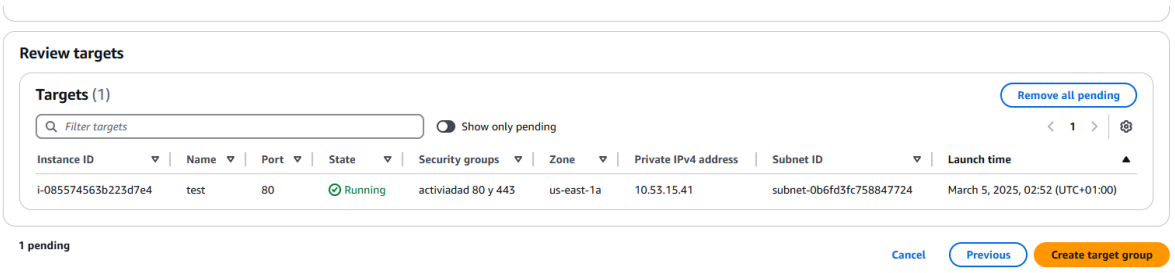
Review targets

Targets (1)

Filter targets

Show only pending

Instance ID	Name	Port	State	Security groups	Zone
i-085574563b223d7e4	test	80	Running	activiadad 80 y 443	us-east-1



mi-target-group

Details

arn:aws:elasticloadbalancing:us-east-1:017133020150:targetgroup/mi-target-group/48f7f8ac7c8c693f

Target type Instance	**Protocol : Port** HTTP: 80	**Protocol v** HTTP1
IP address type IPv4	**Load balancer** None associated	

1 Total targets	0 Healthy 0 Anomalous	0 Unhealthy	1 Unused

▶ **Distribution of targets by Availability Zone (AZ)**

Select values in this table to see corresponding filters applied to the Registered targets table below.

Targets | Monitoring | Health checks | Attributes | Tags

Registered targets (1) Info

Target groups route requests to individual registered targets using the protocol and port number specified. Health checks are perfor automatically applied to HTTP/HTTPS target groups with at least 3 healthy targets.

Filter targets

Instance ID	Name	Port	Zone	Health status
i-085574563b223d7e4	test	80	us-east-1a (us...	Unused

mi-target-group

Details

arn:aws:elasticloadbalancing:us-east-1:017133020150:targetgroup/mi-target-group/48f7f8ac7c8c693f

Target type	Protocol : Port	Protocol ver
Instance	HTTP: 80	HTTP1
IP address type	**Load balancer**	
IPv4	pruebalb	

1	1	0	0
Total targets	Healthy	Unhealthy	Unused
	0 Anomalous		

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Filter targets

Instance ID	Name	Port	Zone	Health status	H
i-085574563b223d7e4	test	80	us-east-1a (us...	Healthy	-

mi-target-group

Details

arn:aws:elasticloadbalancing:us-east-1:017133020150:targetgroup/mi-

Target type
Instance

Protocol : Port
HTTP: 80

IP address type
IPv4

Load balancer
pruebalb

1
Total targets

1
Healthy

0 Anomalous

▶ **Distribution of targets by Availability Zone (AZ)**
Select values in this table to see corresponding filters applied to the Registered targ

Create record Info

Quick create record

▼ Record 1

Record name Info

subdomain aws01.karura.cat

Keep blank to create a record for the root domain.

Record type Info

A – Routes traffic to an IPv4 address and some AWS resources

Alias

Value Info

34.229.17.109

[name] points to **34.229.17.109** and has its traffic proxied through Cloudflare.

Type	Name (required)	IPv4 address (required)	Proxy status	TTL
A		34.229.17.109	Proxied	Auto

Use @ for root

Record Attributes Documentation

The information provided here will not impact DNS record resolution and is only meant for your reference.

Comment

Enter your comment here (up to 100 characters).

Cancel Save

Type	Name (required)	IPv4 address (required)	Proxy status	TTL
A	karura.cat	34.229.17.109	Proxied	Auto

Use @ for root

Record Attributes Documentation

The information provided here will not impact DNS record resolution and is only meant for your reference.

Resumen procedimiento:

- Crear una instancia EC2 y configurar Apache.
- Solicitar un certificado SSL con ACM.
- Crear una Application Load Balancer con un target group que incluye mi instancia EC2.
- Configurar Apache para usar HTTPS con el certificado de ACM.
- Verificar que todo funciona accediendo al ALB a través de HTTPS.

Resultado: