



# **Blue Group**

## **Soluciones AWS para tu negocio**

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# Equipo



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# Objetivo

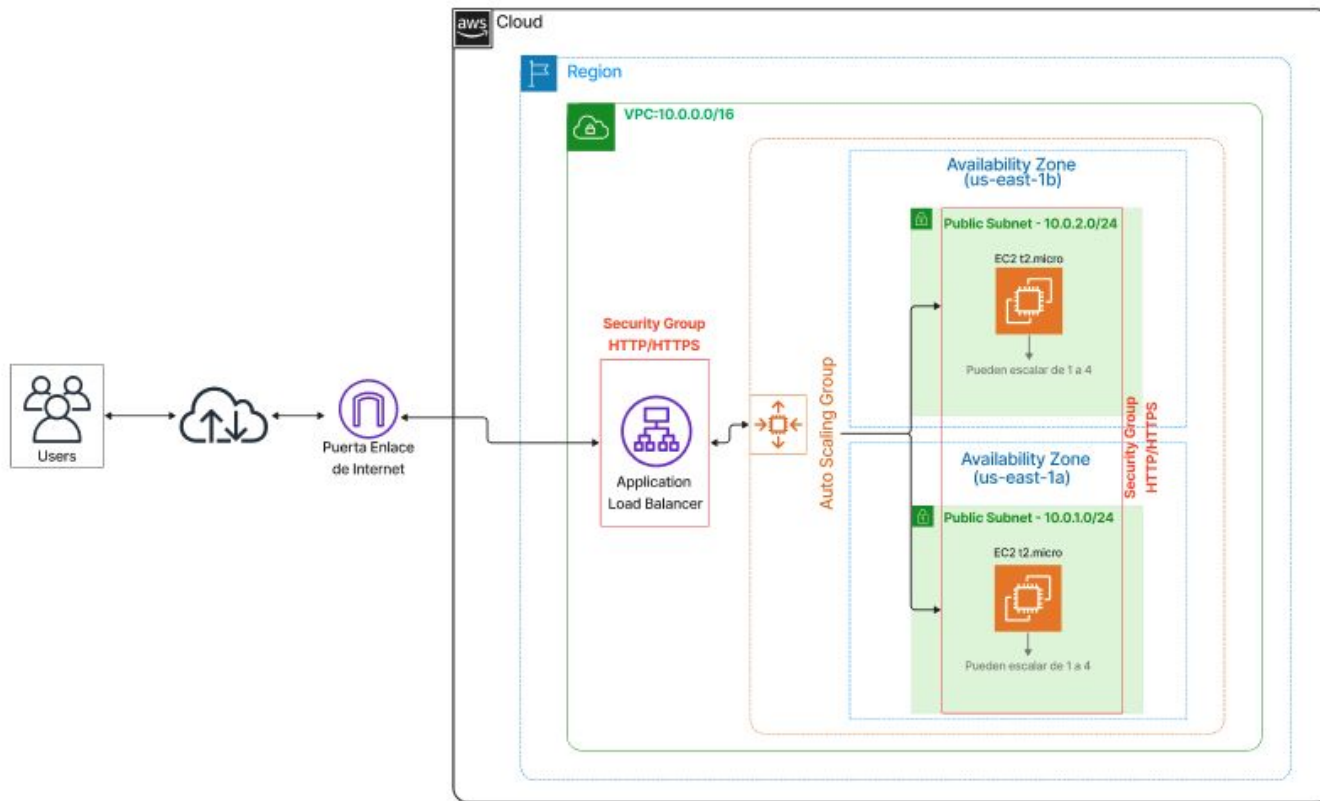
Desplegar una web estática en AWS con alta disponibilidad, asegurándonos de que la caída de una zona de disponibilidad no afecte el acceso a la web.

En un entorno de negocio, la indisponibilidad de un sitio web puede generar pérdidas económicas.



# Arquitectur

## Web de Alta Dispo



# Configuración



# Creación VPC

Creamos la VPC en la región: (Oregón: us-west-2)

Siguiendo los siguientes pasos:

- Vamos al servicio de VPC dentro de la consola de AWS
- Creamos la VPC indicando el nombre.
- Seleccionamos el tamaño del bloque CIDR (10.0.0.0/16)
- Finalmente creamos la VPC.

VPC > Your VPCs > Create VPC

## Create VPC [Info](#)

A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances.

### VPC settings

**Resources to create** [Info](#)  
Create only the VPC resource or the VPC and other networking resources.

☒ VPC only ☐ VPC and more

**Name tag - optional**  
Creates a tag with a key of 'Name' and a value that you specify.

Blue-VPC

**IPv4 CIDR block** [Info](#)  
☒ IPv4 CIDR manual input  
☐ IPAM-allocated IPv4 CIDR block

IPv4 CIDR  
10.0.0.0/16  
CIDR block size must be between /16 and /28.

**IPv6 CIDR block** [Info](#)  
☒ No IPv6 CIDR block  
☐ IPAM-allocated IPv6 CIDR block  
☐ Amazon-provided IPv6 CIDR block  
☐ IPv6 CIDR owned by me

**Tenancy** [Info](#)  
Default

### Tags

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key	Value - optional	
<input type="text" value="Name"/>	<input type="text" value="Blue-VPC"/>	<input type="button" value="Remove tag"/>

You can add 49 more tags.

# Creación Subredes

Creamos las subredes públicas siguiendo los siguientes pasos:

- Seleccionamos la VPC creada previamente (Blue-VPC)
- Se nombra la subnet (Blue-Subnet1)
- Se selecciona la zona de disponibilidad para esta subnet (us-west-2a)
- Seleccionamos el tamaño del bloque CIDR (10.0.1.0/24)
- Finalmente creamos la subnet

**Repetimos** los mismos pasos para crear una **segunda** subnet a la que llamaremos (Blue-Subnet2) , escogemos la zona de disponibilidad (us-west-2b) y el bloque CIDR (10.0.2.0/24).

VPC ID  
Create subnets in this VPC.  
vpc-0dfe6f1abb0638f2a (Blue-VPC)

Associated VPC CIDRs

IPv4 CIDRs  
10.0.0.0/16

**Subnet settings**  
Specify the CIDR blocks and Availability Zone for the subnet.

**Subnet 1 of 1**

**Subnet name**  
Create a tag with a key of 'Name' and a value that you specify.  
Blue-Subnet1  
The name can be up to 256 characters long.

**Availability Zone** [Info](#)  
Choose the zone in which your subnet will reside, or let Amazon choose one for you.  
US West (Oregon) / us-west-2a

**IPv4 VPC CIDR block** [Info](#)  
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.  
10.0.0.0/16

**IPv4 subnet CIDR block**  
10.0.1.0/24 256 IPs  
< > ^ v

▼ **Tags - optional**

Key	Value - optional	
Q Name	Q Blue-Subnet1	Remove

Add new tag

You can add 49 more tags.

Remove

Add new subnet

Cancel Create subnet



# Internet Gateway

Creamos el Gateway de Internet siguiendo estos pasos:

- Indicamos el nombre (Blue-igw)
- Finalmente creamos el Gateway de Internet.

A continuación, debemos **conectarla** con la VPC creada previamente

✓ vpc-0e1dcdd7779c6e63b / Blue-VPC se creó correctamente

[VPC](#) > [Gateways de Internet](#) > Conectar a la VPC (igw-06ee98e100e7c7a7f)

## Conectar a la VPC (igw-06ee98e100e7c7a7f)

[Información](#)

**VPC**  
Conecte una gateway de Internet a la VPC para habilitar la comunicación con Internet. Especifique la VPC que desea asociar a continuación.

**VPC disponibles**  
Conecte la gateway de Internet a esta VPC.

🔍 Seleccionar una VPC

vpc-0e1dcdd7779c6e63b - Blue-VPC

► Comando de la interfaz de línea de comandos de `vpc-0e1dcdd7779c6e63b - Blue-VPC`

Cancelar

Conectar gateway de Internet

[VPC](#) > [Gateways de Internet](#) > Crear gateway de Internet

## Crear gateway de Internet

[Información](#)

Una gateway de Internet es un router virtual que conecta una VPC a Internet. Para crear una nueva gateway de Internet, especifique el nombre de la gateway a continuación.

**Configuración de gateway de Internet**

**Etiqueta de nombre**  
Crea una etiqueta con una clave de "Nombre" y el valor que usted especifique.

Blue-igw

**Etiquetas: opcional**  
Una etiqueta es una marca que se asigna a un recurso de AWS. Cada etiqueta consta de una clave y un valor opcional. Puede utilizar las etiquetas para buscar y filtrar sus recursos o hacer un seguimiento de los costos de AWS.

Clave

Valor - *opcional*

🔍 Name

🔍 Blue-igw

Quitar

Agregar nueva etiqueta

Puede agregar 49 más etiquetas.

Cancelar

Crear gateway de Internet

# Route Table

Creemos la tabla de enrutamiento siguiendo estos pasos:

- Nombramos la tabla (Blue-Route-table)
- Se selecciona la VPC creada previamente
- Creamos la tabla de enrutamiento.
- Asociamos subredes explícitas a la tabla de enrutamiento.
- A continuación en la pestaña rutas, damos acceso a la tabla de enrutamiento a Internet.

VPC > Route tables > Create route table

## Create route table info

A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.

### Route table settings

Name - *optional*  
Create a tag with a key of 'Name' and a value that you specify.

Blue-Route-table

VPC  
The VPC to use for this route table.

vpc-0dfe6f1abb0638f2a (Blue-VPC)

### Tags

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key

Q Name X

Value - *optional*

Q Blue-Route-table X Remove

Add new tag

You can add 49 more tags.

Cancel Create route table

rtb-0975dc006cd40afa2 / Blue-Route-Table

Detalles Rutas **Asociaciones de subredes** Asociaciones de borde Propagación de rutas Etiquetas

### Asociaciones de subredes explícitas (2)

Q Buscar asociación de subredes

Nombre	ID de subred	CIDR IPv4
Blue-Subnet1	<a href="#">subnet-069860955eb3a5fea</a>	10.0.1.0/24
Blue-Subnet2	<a href="#">subnet-0e04300ef1a3e0ea1</a>	10.0.2.0/24

VPC > Tablas de enrutamiento > rtb-03a5a148124bcf62e > Editar rutas

## Editar rutas

Destino	Destino	Estado
10.0.0.0/16	local	Activo
Q 0.0.0.0/0 X	Q local X	
	Puerta de enlace de Internet	Activo
	Q igw-002fcae5bd92d7536 X	

Agregar ruta

# Target Groups

## Dentro de EC2 nos dirigimos a Target groups para configurarlo y crearlo:

- Elegimos Instancias para el target type.
- Establecemos "Blue-Target-Group" como nombre del grupo de destino.
- Seleccionamos el protocolo que usaran las instancias, en este caso HTTP en el puerto 80.
- Seleccionamos la VPC donde se encuentran las instancias, en este caso Blue-Target-Group.

Successfully created the target group: Blue-Target-Group. Anomaly detection is automatically applied to all registered targets. Results can be viewed in the Targets tab.

### Blue-Target-Group

Actions

**Details**

arn:aws:elasticloadbalancing:us-west-2:534171847709:targetgroup/Blue-Target-Group/7e9d56ef7bd5c069

<b>Target type</b> Instance	<b>Protocol : Port</b> HTTP: 80	<b>Protocol version</b> HTTP1	<b>VPC</b> <a href="#">vpc-0dfe6f1abb0638f2a</a>
<b>IP address type</b> IPv4	<b>Load balancer</b> <a href="#">None associated</a>		

0	0	0	0	0	0
Total targets	Healthy	Unhealthy	Unused	Initial	Draining
	0 Anomalous				

**Targets** | Monitoring | Health checks | Attributes | Tags

**Registered targets (0)** [info](#) [Anomaly mitigation: Not applicable](#) [Deregister](#) [Register targets](#)

Target groups route requests to individual registered targets using the protocol and port number specified. Health checks are performed on all registered targets according to the target group's health check settings. Anomaly detection is automatically applied to HTTP/HTTPS target groups with at least 3 healthy targets.

Instance ID	Name	Port	Zone	Health status	Health status details	Adminis...	Overrid...	Launch t...
No registered targets								
You have not registered targets to this group yet								

[Register targets](#)

### Specify group details

Your load balancer routes requests to the targets in a target group and performs health checks on the targets.

**Basic configuration**  
Settings in this section can't be changed after the target group is created.

**Choose a target type**

☒ **Instances**

- Supports load balancing to instances within a specific VPC.
- Facilitates the use of [Amazon EC2 Auto Scaling](#) to manage and scale your EC2 capacity.

**Target group name**

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 detection for the targets and you can set mitigation options once your target group is created. This choice cannot be changed after creation.

1-65535

**IP address type**  
Only targets with the indicated IP address type can be registered to this target group.

☒ **IPv4**  
Each instance has a default network interface (eth0) that is assigned the primary private IPv4 address. The instance's primary private IPv4 address is the one that will be applied to the target.

☐ **IPv6**  
Each instance you register must have an assigned primary IPv6 address. This is configured on the instance's default network interface (eth0). [Learn more](#)

**VPC**  
Select the VPC with the instances that you want to include in the target group. Only VPCs that support the IP address type selected above are available in this list.

vpc-0dfe6f1abb0638f2a  
IPv4 VPC CIDR: 10.0.0.0/16

**Protocol version**

☒ **HTTP1**  
Send requests to targets using HTTP/1.1. Supported when the request protocol is HTTP/1.1 or HTTP/2.

☐ **HTTP2**  
Send requests to targets using HTTP/2. Supported when the request protocol is HTTP/2 or gRPC, but gRPC-specific features are not available.

☐ **gRPC**  
Send requests to targets using gRPC. Supported when the request protocol is gRPC.

**Health checks**  
The associated load balancer periodically sends requests, per the settings below, to the registered targets to test their status.

**Health check protocol**

**Health check path**  
Use the default path of "/" to perform health checks on the root, or specify a custom path if preferred.

Up to 1024 characters allowed.

**Advanced health check settings**

**Attributes**

[Certain default attributes will be applied to your target group. You can view and edit them after creating the target group.](#)

**Tags - optional**  
Consider adding tags to your target group. Tags enable you to categorize your AWS resources so you can more easily manage them.

[Cancel](#) [Next](#)

# Security Groups

## En este caso primero creamos un grupo de seguridad para las instancias EC2 y otro para el Application Load Balancer

- Primero asignamos el nombre al grupo de seguridad.
- Añadimos una breve descripción.
- Seleccionamos nuestra Blue-VPC en ambos casos.
- Configuramos las reglas de entrada y salida.
- Para las instancias, reglas entrantes HTTP con puerto 80 y SSH con puerto 22.
- Las reglas salientes las configuramos para que permitan todo el tráfico.

Las correspondientes al Application Load Balancer configuramos las reglas de salida permitiendo el tráfico HTTP desde cualquier dirección.

**Create security group** [info](#)

A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. To create a new security group, complete the fields below.

**Basic details**

**Security group name** [info](#)

Blue-Seg-grp-lb

Name cannot be edited after creation.

**Description** [info](#)

Allow HTTP hacia Application Load Balancer

**VPC** [info](#)

vpc-0d6e14ec21cf8fd678 (Blue-VPC)

**Inbound rules** [info](#)

This security group has no inbound rules.

[Add rule](#)

**Outbound rules** [info](#)

Type: [info](#) Protocol: [info](#) Port range: [info](#) Destination: [info](#) Description - optional: [info](#)

HTTP TCP 80 Anywhere... 0.0.0.0/0

HTTPS TCP 443 Anywhere... 0.0.0.0/0

[Add rule](#)

Rules with destination of 0.0.0.0/0 or /:: allow your instances to send traffic to any IPv4 or IPv6 address. We recommend setting security group rules to be more restrictive and to only allow traffic to specific known IP addresses.

**Tags - optional**

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

No tags associated with the resource.

[Add new tag](#)

You can add up to 50 more tags.

[Cancel](#) [Create security group](#)

**Grupos de seguridad (1/4)** [información](#)

[Acciones](#) [Exportar los grupos de seguridad a CSV](#) [Crear grupo de seguridad](#)

Find resources by attribute or tag

Name	ID de grupo de seguridad	Nombre del grupo de seguridad	ID de la VPC	Descripción
-	sg-048d71cc8d419f98	default	vpc-0a199b423f9160166	default VPC security group
-	sg-0a199b423f9160166	Blue-Seg-grp-instances	vpc-0a199b423f9160166	Allow SSH and HTTP requests to instan...
-	sg-0a614ec21cf8fd678	Blue-Seg-grp-lb	vpc-0a199b423f9160166	Allow HTTP hacia Application Load Bala...
-	sg-0b64d328628b83c97	default	vpc-0a7f7d6d9a7af32d	default VPC security group

**sg-0a199b423f9160166 - Blue-Seg-grp-instances**

[Detalles](#) [Reglas de entrada](#) [Reglas de salida](#) [Compartiendo: novedad](#) [Asociaciones de VPC: novedad](#) [Etiquetas](#)

**Reglas de entrada (2)**

[Administrar etiquetas](#) [Editar reglas de entrada](#)

Name	ID de la regla del gr...	Versión de IP	Tipo	Protocolo	Intervalo de puertos	Origen	Descripción
-	sg-0a199b423f9160166	IPv4	HTTP	TCP	80	0.0.0.0/0	-
-	sg-0a199b423f9160166	IPv4	SSH	TCP	22	0.0.0.0/0	-

**Grupos de seguridad (1/4)** [información](#)

[Acciones](#) [Exportar los grupos de seguridad a CSV](#) [Crear grupo de seguridad](#)

Find resources by attribute or tag

Name	ID de grupo de seguridad	Nombre del grupo de seguridad	ID de la VPC	Descripción
-	sg-048d71cc8d419f98	default	vpc-0a199b423f9160166	default VPC security group
-	sg-0a199b423f9160166	Blue-Seg-grp-instances	vpc-0a199b423f9160166	Allow SSH and HTTP requests to instan...
-	sg-0a614ec21cf8fd678	Blue-Seg-grp-lb	vpc-0a199b423f9160166	Allow HTTP hacia Application Load Bala...
-	sg-0b64d328628b83c97	default	vpc-0a7f7d6d9a7af32d	default VPC security group

**sg-0a614ec21cf8fd678 - Blue-Seg-grp-lb**

[Detalles](#) [Reglas de entrada](#) [Reglas de salida](#) [Compartiendo: novedad](#) [Asociaciones de VPC: novedad](#) [Etiquetas](#)

**Reglas de entrada (2)**

[Administrar etiquetas](#) [Editar reglas de entrada](#)

Name	ID de la regla del gr...	Versión de IP	Tipo	Protocolo	Intervalo de puertos	Origen	Descripción
-	sg-0a199b423f9160166	IPv4	HTTP	TCP	443	0.0.0.0/0	-
-	sg-0078573ab94135ee	IPv4	HTTP	TCP	80	0.0.0.0/0	-

# Load Balancer

- Application Load Balancer optimizado para aplicaciones web.
- Distribución equitativa entre las instancias EC2.
- Escalabilidad automática para manejar grandes volúmenes de tráfico.
- Nombrar el Load Balancer como Blue-Load-Balancer.
- Seleccionamos nuestra VPC "Blue-VPC" para asociarlo.
- Marcamos las zonas de disponibilidad us-west-2a y us-west-2b.
- Seleccionamos nuestro grupo de seguridad "Blue-Seg-grp-instances".

## Create Application Load Balancer [info](#)

The Application Load Balancer distributes incoming HTTP and HTTPS traffic across multiple targets such as Amazon EC2 instances, microservices, and containers, based on request attributes. When the load balancer receives a connection request, it evaluates the listener rules in priority order to determine which rule to apply, and if applicable, it selects a target from the target group for the rule action.

### ► How Application Load Balancers work

#### Basic configuration

##### Load balancer name

Name must be unique within your AWS account and can't be changed after the load balancer is created.

Blue-Load-balancer

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

##### Scheme [info](#)

Scheme can't be changed after the load balancer is created.

##### ☒ Internet-facing

- Serves internet-facing traffic.
- Has public IP addresses.
- DNS name is publicly resolvable.
- Requires a public subnet.

##### ☐ Internal

- Serves internal traffic.
- Has private IP addresses.
- DNS name is not publicly resolvable.
- Compatible with the IPv4 and Dualstack IP address types.

##### Load balancer IP address type [info](#)

Select the front-end IP address type to assign to the load balancer. The VPC and subnets mapped to this load balancer must include the selected IP address type. Public IPv4 addresses have an additional cost.

##### ☒ IPv4

Includes only IPv4 addresses.

##### ☐ Dualstack

Includes IPv4 and IPv6 addresses.

##### ☐ Dualstack without public IPv4

Includes a public IPv6 address, and private IPv4 and IPv6 addresses. Compatible with internet-facing load balancers only.

#### Network mapping [info](#)

The load balancer routes traffic to targets in the selected subnets, and in accordance with your IP address settings.

##### VPC [info](#)

The load balancer will exist and scale within the selected VPC. The selected VPC is also where the load balancer targets must be hosted unless routing to Lambda or on-premises targets, or if using VPC peering, or if using VPC peering, to confirm the VPC for your targets, view [target groups](#). For a new VPC, [create a VPC](#).

Blue-VPC

vpc-0d9ef1ab00c38f2a

IPv4 VPC CIDR: 10.0.0.0/16

##### Mappings [info](#)

Select at least two Availability Zones and one subnet per zone. The load balancer routes traffic to targets in these Availability Zones only. Availability Zones that are not supported by the load balancer or the VPC are not available for selection.

##### Availability Zones

##### ☒ us-west-2a (usw2-az1)

Subnet

subnet-0424569c2057704c0

IPv4 subnet CIDR: 10.0.1.0/24

Blue-Subnet1

IPv4 address

Assigned by AWS

##### ☒ us-west-2b (usw2-az2)

Subnet

subnet-05c7d59936e1572fd

IPv4 subnet CIDR: 10.0.2.0/24

Blue-Subnet2

IPv4 address

Assigned by AWS

#### Security groups [info](#)

A security group is a set of firewall rules that control the traffic to your load balancer. Select an existing security group, or you can [create a new security group](#).

##### Security groups

Select up to 5 security groups

Blue-Seg-grp-instances

sg-050d6d9c1a31920d9

VPC: vpc-0d9ef1ab00c38f2a

# Load Balancer

- Configuramos un listener en el puerto 80 y lo asociamos al target group.
- Podemos ver el resumen de las configuraciones.

Finalmente creamos el application load balancer

**Security groups** info  
A security group is a set of firewall rules that control the traffic to your load balancer. Select an existing security group, or you can [create a new security group](#).

**Security groups**  
Select up to 5 security groups

Blue-Seg-grp-instances  
sg-03a5656c:1a319290b VPC: vpc-0dffe6f1ab10638f2a

**Listeners and routing** info  
A listener is a process that checks for connection requests using the port and protocol you configure. The rules that you define for a listener determine how the load balancer routes requests to its registered targets.

**▼ Listener HTTP:80**

Protocol HTTP Port 80

Default action Forward to Blue-Target-Group  
Target type: Instance, IPv4

1-455535

HTTP

Remove

**Listener tags - optional**  
Consider adding tags to your listener. Tags enable you to categorize your AWS resources so you can more easily manage them.  
[Add listener tag](#)  
You can add up to 50 more tags.

[Add listener](#)

**► Load balancer tags - optional**  
Consider adding tags to your load balancer. Tags enable you to categorize your AWS resources so you can more easily manage them. The 'Key' is required, but 'Value' is optional. For example, you can have Key = production-webserver, or Key = webserver, and Value = production.

**Optimize with service integrations - optional** info  
Optimize your load balancing architecture by integrating AWS services with this load balancer at launch. You can also add these and other services after your load balancer is created by reviewing the load balancer's "Integrations" tab.

**Review**  
Review the load balancer configurations and make changes if needed. After you finish reviewing the configurations, choose **Create load balancer**.

**Summary**  
Review and confirm your configurations. [Estimate cost](#)

**Basic configuration** edit  
Blue-Load-balancer

- Internet-facing
- IPV4

**Security groups** edit

- Blue-Seg-grp-instances  
sg-03a5656c:1a319290b

**Network mapping** edit  
VPC vpc-0dffe6f1ab10638f2a  
Blue-VPC

- us-west-2a  
subnet-0424546b:c057704c0  
Blue-Subnet1
- us-west-2b  
subnet-05c7d5936e:1572f6  
Blue-Subnet2

**Listeners and routing** edit

- HTTP 80 defaults to:  
Target group not defined

**Service integrations** edit  
Amazon CloudFront + AWS Web Application Firewall (WAF): None  
AWS WAF: None  
AWS Global Accelerator: None

**Tags** edit  
None

**Attributes**  
☒ Certain default attributes will be applied to your load balancer. You can view and edit them after creating the load balancer.

**Creation workflow and status**  
**► Server-side tasks and status**  
After completing and submitting the above steps, all server-side tasks and their statuses become available for monitoring.

Cancel [Create load balancer](#)

Description

Amazon Linux 2023 is a modern, general purpose Linux-based OS that comes with 5 years of long term support. It is optimized for AWS and designed to provide a secure, stable and high-performance execution environment to develop and run your cloud applications.

Amazon Linux 2023 AMI 2023.6.2024121.0 x86\_64 HVM kernel-6.1

Architecture

64-bit (x86)

Boot mode

uefi-preferred

AMI ID

ami-055c3d4f0bbeb5878

Username

ec2-user

Verified provider

▼ Instance type

[Info](#) [Get advice](#)

Advanced

Instance type

c2.micro

Family: c2 1 vCPU 1 GiB Memory Current generation: true

On-Demand Linux base pricing: 0.0116 USD per Hour

On-Demand SUSE base pricing: 0.0116 USD per Hour

On-Demand RHEL base pricing: 0.028 USD per Hour

On-Demand Windows base pricing: 0.0162 USD per Hour

On-Demand Ubuntu Pro base pricing: 0.0134 USD per Hour

Free tier eligible

All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software

▼ Key pair (login)

[Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name

Don't include in launch template

Create new key pair

# Plantilla de lanzamiento

## Datos de usuario - opcional [Información](#)

Cargue un archivo con los datos de usuario o escríbalos en el campo.

[Elegir archivo](#)

```
#!/bin/bash
sudo yum update -y
sudo yum install -y httpd git
sudo systemctl start httpd

# Limpiar contenido existente
sudo rm -rf /var/www/html/*

# Clonar repositorio
sudo git clone https://github.com/TeamAWSBlueProject/Final-Project-AWS.git
/var/www/html || echo "Git clone failed" >> /var/log/user-data.log
echo "const ip=${hostname -f}" > /var/www/html/script.js

# Ajustar permisos
sudo chown -R apache:apache /var/www/html
sudo chmod -R 755 /var/www/html

# Reiniciar Apache
sudo systemctl restart httpd

# Log status
sudo systemctl status httpd >> /var/log/user-data.log
sudo ls -l /var/www/html >> /var/log/user-data.log
```

☐ Los datos de usuario ya han sido codificados en base64

## Tipo de servidor virtual (tipo de instancia)

t2.micro

## Firewall (grupo de seguridad)

Blue-Seg-grp-instances

## Almacenamiento (volumenes)

Volumenes: 1 (8 GiB)

**Nivel gratuito:** El primer año incluye 750 horas de uso de instancias t2.micro (o t3.micro en las regiones en las que t2.micro no esté disponible) en las AMI del nivel gratuito al mes, 750 horas de uso de direcciones IPv4 públicas al mes, 30 millones de E/S, 2 millones de E/S, 1 GB de instantáneas y 100 GB de ancho de banda a Internet.

Cancelar

Crear versión de plantilla

## Create key pair

### Key pair name

Key pairs allow you to connect to your instance securely.

Blue-use1

The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

### Key pair type

☒ RSA

RSA encrypted private and public key pair

☐ ED25519

ED25519 encrypted private and public key pair

### Private key file format

☐ .pem

For use with OpenSSH

☒ .ppk

For use with PuTTY

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. [Learn more](#)

Cancel

Create key pair

## Launch Templates (1) [info](#)

Search

<input type="checkbox"/>	Launch Template ID	Launch Template Name	Default Version	Latest Version	Create Time	Created By	Managed	Operator
<input type="checkbox"/>	lt-0da16706e38c9d1fe	Blue-launch-template	1	1	2024-12-10T21:06:41.000Z	arn:aws:sts:534171847709:ass...	false	-



# Auto Scaling Group

## Creamos el grupo de Auto Escalado

- Nombramos el Grupo (Blue-Auto-Scaling)
- Seleccionamos la plantilla de Lanzamiento creada previamente (Blue-launch-template).

Siguiente...

### Choose launch template or configuration [Info](#)

Specify a launch template that contains settings common to all EC2 instances that are launched by this Auto Scaling group. If you currently use launch configurations, you might consider migrating to launch templates.

#### Name

**Auto Scaling group name**  
Enter a name to identify the group.

Must be unique to this account in the current Region and no more than 255 characters.

#### Launch template [Info](#)

[Switch to launch configuration](#)

**Launch template**  
Choose a launch template that contains the instance-level settings, such as the Amazon Machine Image (AMI), instance type, key pair, and security groups.

[↻](#)

[Create a launch template](#)

**Version**  
[↻](#)

[Create a launch template version](#)

<b>Description</b> -	<b>Launch template</b> <a href="#">Blue-launch-template</a> lt-0da167b6c38c9d1fe	<b>Instance type</b> t2.micro
<b>AMI ID</b> ami-055e3d4f0bbeb5878	<b>Security groups</b> -	<b>Request Spot Instances</b> No
<b>Key pair name</b> Blue-user	<b>Security group IDs</b> <a href="#">sg-03a565ec1a319290b</a>	

**Additional details**

<b>Storage (volumes)</b> -	<b>Date created</b> Tue Dec 10 2024 22:06:41 GMT+0100 (hora estándar de Europa central)
-------------------------------	--

[Cancel](#) [Next](#)

# Auto Scaling Group

- Seleccionamos la VPC
- Seleccionamos las Zonas de disponibilidad que indicamos en las Subredes
- Seleccionamos el Balanced best effort

Siguiente...

Step 1

Choose launch template or configuration

Step 2

**Choose instance launch options**

Step 3 - optional

Integrate with other services

Step 4 - optional

Configure group size and scaling

Step 5 - optional

Add notifications

Step 6 - optional

Add tags

Step 7

Review

### Choose instance launch options Info

Choose the VPC network environment that your instances are launched into, and customize the instance types and purchase options.

**Instance type requirements Info**

Override launch template

You can keep the same instance attributes or instance type from your launch template, or you can choose to override the launch template by specifying different instance attributes or manually adding instance types.

Launch template	Version	Description
Blue-launch-template <a href="#">[i]</a> lt-0da167b6e38c9d1fe	Default	

**Instance type**  
t2.micro

### Network Info

For most applications, you can use multiple Availability Zones and let EC2 Auto Scaling balance your instances across the zones. The default VPC and default subnets are suitable for getting started quickly.

**VPC**  
Choose the VPC that defines the virtual network for your Auto Scaling group.

vpc-0df06f1abb0638f2a (Blue-VPC)  
10.0.0.0/16

[Create a VPC \[i\]](#)

**Availability Zones and subnets**  
Define which Availability Zones and subnets your Auto Scaling group can use in the chosen VPC.

Select Availability Zones and subnets

us-west-2a | subnet-0424569c2057704c0 (Blue-Subnet1) [\[x\]](#)  
10.0.1.0/24

us-west-2b | subnet-05e7d59936e1572fd (Blue-Subnet2) [\[x\]](#)  
10.0.2.0/24

[Create a subnet \[i\]](#)

**Availability Zone distribution - new**  
Auto Scaling automatically balances instances across Availability Zones. If launch failures occur in a zone, select a strategy.

☒ **Balanced best effort**  
If launches fail in one Availability Zone, Auto Scaling will attempt to launch in another healthy Availability Zone.

☐ **Balanced only**  
If launches fail in one Availability Zone, Auto Scaling will continue to attempt to launch in the unhealthy Availability Zone to preserve balanced distribution.

Cancel

Skip to review

Previous

Next

# Auto Scaling Group

- Integramos el Load Balancer que creamos previamente.
- Escogemos el Application Load Balancer (Blue-Target-Group | HTTP)
- Seleccionamos “No VPC Lattice Service”
- Siguiente...

Step 1

● Choose launch template or configuration

Step 2

● Choose instance launch options

Step 3 - optional

● **Integrate with other services**

Step 4 - optional

● Configure group size and scaling

Step 5 - optional

● Add notifications

Step 6 - optional

● Add tags

Step 7

● Review

### Integrate with other services - *optional* info

Use a load balancer to distribute network traffic across multiple servers. Enable service-to-service communications with VPC Lattice. Shift resources away from impaired Availability Zones with zonal shift. You can also customize health check replacements and monitoring.

#### Load balancing info

Use the options below to attach your Auto Scaling group to an existing load balancer, or to a new load balancer that you define.

☐ No load balancer

☒ Attach to an existing load balancer

☐ Attach to a new load balancer

Traffic to your Auto Scaling group will not be fronted by a load balancer.

Choose from your existing load balancers.

Quickly create a basic load balancer to attach to your Auto Scaling group.

#### Attach to an existing load balancer

Select the load balancers that you want to attach to your Auto Scaling group.

☒ Choose from your load balancer target groups

☐ Choose from Classic Load Balancers

This option allows you to attach Application, Network, or Gateway Load Balancers.

#### Existing load balancer target groups

Only instance target groups that belong to the same VPC as your Auto Scaling group are available for selection.

Select target groups

Blue-Target-Group | HTTP

Application Load Balancer: Blue-Load-balancer

#### VPC Lattice integration options info

To improve networking capabilities and scalability, integrate your Auto Scaling group with VPC Lattice. VPC Lattice facilitates communications between AWS services and helps you connect and manage your applications across compute services in AWS.

#### Select VPC Lattice service to attach

☒ No VPC Lattice service

☐ Attach to VPC Lattice service

VPC Lattice will not manage your Auto Scaling group's network access and connectivity with other services.

Incoming requests associated with specified VPC Lattice target groups will be routed to your Auto Scaling group.

[Create new VPC Lattice service](#)

#### Application Recovery Controller (ARC) zonal shift - *new* info

During an Availability Zone impairment, target instance launches towards other healthy Availability Zones.

☐ Enable zonal shift

New instance launches will be retargeted towards healthy Availability Zones until the zonal shift is cancelled.

# Auto Scaling Group

- Configuramos la capacidad indicando el tamaño del grupo (2)
- Indicamos la capacidad Min (2) y Max (4), esto según los requerimientos del proyecto.
- Seleccionamos las políticas de no escalado
- Escogemos las políticas de mantenimiento de la instancia.
- Siguiendo...

Step 1: Choose launch template or configuration

Step 2: Choose instance launch options

Step 3 - optional: Integrate with other services

Step 4 - optional: **Configure group size and scaling**

Step 5 - optional: Add notifications

Step 6 - optional: Add tags

Step 7: Review

### Configure group size and scaling - optional [info](#)

Define your group's desired capacity and scaling limits. You can optionally add automatic scaling to adjust the size of your group.

#### Group size [info](#)

Set the initial size of the Auto Scaling group. After creating the group, you can change its size to meet demand, either manually or by using automatic scaling.

**Desired capacity type**

Choose the unit of measurement for the desired capacity value. vCPUs and Memory(GiB) are only supported for mixed instances groups configured with a set of instance attributes.

Units (number of instances) ▼

**Desired capacity**

Specify your group size.

2

#### Scaling [info](#)

You can resize your Auto Scaling group manually or automatically to meet changes in demand.

**Scaling limits**

Set limits on how much your desired capacity can be increased or decreased.

**Min desired capacity**

2

Equal or less than desired capacity

**Max desired capacity**

4

Equal or greater than desired capacity

**Automatic scaling - optional**

Choose whether to use a target tracking policy [info](#)

You can set up other metric-based scaling policies and scheduled scaling after creating your Auto Scaling group.

☒ **No scaling policies**

Your Auto Scaling group will remain at its initial size and will not dynamically resize to meet demand.

☐ **Target tracking scaling policy**

Choose a CloudWatch metric and target value and let the scaling policy adjust the desired capacity in proportion to the metric's value.

#### Instance maintenance policy [info](#)

Control your Auto Scaling group's availability during instance replacement events. This includes health checks, instance refreshes, maximum instance lifetime features and events that happen automatically to keep your group balanced, called rebalancing events.

**Choose a replacement behavior depending on your availability requirements**

**Mixed behavior**

☒ **No policy**

For rebalancing events, new instances will launch before terminating others. For all other events, instances terminate and launch at the same time.

**Prioritize availability**

☐ **Launch before terminating**

Launch new instances and wait for them to be ready before terminating others. This allows you to go above your desired capacity by a given percentage and may temporarily increase costs.

**Control costs**

☐ **Terminate and launch**

Terminate and launch instances at the same time. This allows you to go below your desired capacity by a given percentage and may temporarily reduce availability.

**Flexible**

☐ **Custom behavior**

Set custom values for the minimum and maximum amount of available capacity. This gives you greater flexibility in setting how far below and over your desired capacity EC2 Auto Scaling goes when replacing instances.

# Auto Scaling Group

- Revisamos el resumen de lo que hemos configurado.
- Finalmente creamos el grupo de Auto Escalado.

**Instance maintenance policy**

Replacement behavior  
No policy

Min healthy percentage  
-

Max healthy percentage  
-

**Additional settings**

Instance scale-in protection  
Disabled

Monitoring  
Disabled

Default instance warmup  
Disabled

**Capacity Reservation preference**

Preference  
Default

Capacity Reservation IDs  
-

Resource Groups  
-

Step 5: Add notifications

Notifications

No notifications

Edit

Step 6: Add tags

Tags (0)

Key	Value	Tag new instances
No tags		

Edit

Preview code

Cancel

Previous

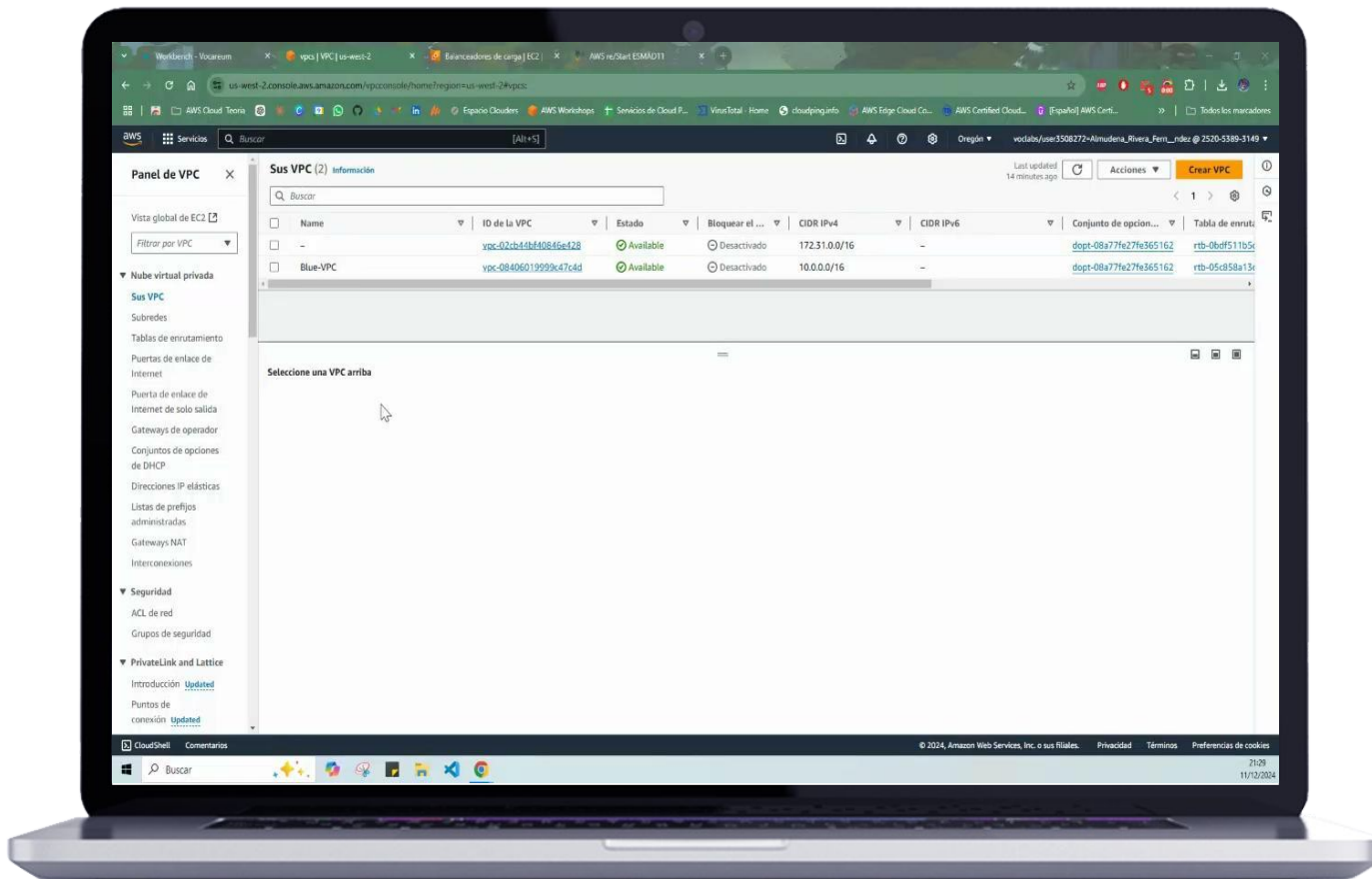
Create Auto Scaling group

Auto Scaling groups (1) info									
Search your Auto Scaling groups									
<input type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones	
<input type="checkbox"/>	Blue-Auto-Scaling	Blue-launch-template   Version Default	0	Updating capacity...	2	2	4	us-west-2a, us-west-2b	

**Comprobar la configuración**



# Demostración



**Gracias**

The word "Gracias" is written in a bold, black, sans-serif font. Below it is the Amazon smile logo, which is a curved orange arrow pointing from left to right, ending in a small arrowhead.