

# PROJECT



create vpc

Vpc name: my-vpc

IPv4 CIDR block :10.0.0.0/16

## 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.

my-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

You successfully created **vpc-05dd91c8b9f878c1f / my-vpc**

VPC ID: **vpc-05dd91c8b9f878c1f** State: **Available** DNS hostnames: **Disabled** DNS resolution: **Enabled**

Tenancy: **Default** DHCP option set: **dopt-094faf97d98ff62b1** Main route table: **rtb-04b41ef7c98daf9cd** Main network ACL: **acl-0594795cfea99e8ad**

Default VPC: **No** IPv4 CIDR: **10.0.0.0/16** IPv6 pool: **-** IPv6 CIDR (Network border group): **-**

Network Address Usage metrics: **Disabled** Route 53 Resolver DNS Firewall rule groups: **-** Owner ID: **058264302028**

Create subnet: 1

Subnet name: public-subnet1

IPv4 subnet CIDR block: 10.0.0.0/24

AWS Services Search [Alt+S]

VPC > Subnets > Create subnet

## Create subnet Info

**VPC**

**VPC ID**  
Create subnets in this VPC.  
vpc-05dd91c8b9f878c1f (my-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.  
public-subnet 1  
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 East (N. Virginia) / us-east-1a ▾

**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**  
10.0.0.0/24 256 IPs  
< > ^ v  
Type - optional

Create subnet:2

Subnet name: public subnet:2

IPv4 subnet CIDR block:10.0.1.0/24

aws | Services | Search [Alt+S]

VPC > Subnets > Create subnet

## Create subnet Info

**VPC**

**VPC ID**  
Create subnets in this VPC.  
vpc-05dd91c8b9f878c1f (my-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.  
public-subnet2  
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 East (N. Virginia) / us-east-1b ▾

**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

Create subnet:3

Subnet name: private subnet1

IPv4 subnet CIDR block:10.0.2.0/24

Create subnet [Info](#)

**VPC**

**VPC ID**  
Create subnets in this 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.  
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.  
▼

**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.  
▼

**IPv4 subnet CIDR block**  
 256 IPs

Create subnet:4

Subnet name: private subnet2

IPv4 subnet CIDR block:10.0.3.0/24

Create subnet [Info](#)

**VPC**

VPC ID  
Create subnets in this VPC.  
vpc-05dd91c8b9f878c1f (my-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.  
private-subnet2 \*  
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 East (N. Virginia) / us-east-1b ▾

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  
10.0.3.0/24 256 IPs

Create subnet:5

Subnet name: private-subnet-rds1

IPv4 subnet CIDR block:10.0.4.0/24

#### VPC ID

Create subnets in this VPC.

vpc-05dd91c8b9f878c1f (my-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.

private-subnet-rds1

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 East (N. Virginia) / us-east-1a ▾

##### 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

10.0.4.0/24

256 IPs

## Create subnet:5

Subnet name: private-subnet-rds2

IPv4 subnet CIDR block:10.0.5.0/24

## Create subnet Info

### VPC

#### VPC ID

Create subnets in this VPC.



#### Associated VPC CIDs

##### IPv4 CIDs

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.

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.



##### 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.



##### IPv4 subnet CIDR block

256 IPs

| <input type="checkbox"/> | Name                | Subnet ID                | State     | VPC                              | IPv4 CIDR      |
|--------------------------|---------------------|--------------------------|-----------|----------------------------------|----------------|
| <input type="checkbox"/> | -                   | subnet-0a3d329ab7558eb5f | Available | vpc-0edc30e9f2c48c900   defal... | 172.31.48.0/20 |
| <input type="checkbox"/> | public-subnet 1     | subnet-026e8bb56c2138f5b | Available | vpc-05dd91c8b9f878c1f   my-vpc   | 10.0.0.0/24    |
| <input type="checkbox"/> | public-subnet2      | subnet-034d011e6d62b5aa4 | Available | vpc-05dd91c8b9f878c1f   my-vpc   | 10.0.1.0/24    |
| <input type="checkbox"/> | private-subnet1     | subnet-05dcad935158a22f9 | Available | vpc-05dd91c8b9f878c1f   my-vpc   | 10.0.2.0/24    |
| <input type="checkbox"/> | private-subnet2     | subnet-0e9569786ab72e57d | Available | vpc-05dd91c8b9f878c1f   my-vpc   | 10.0.3.0/24    |
| <input type="checkbox"/> | private-subnet-rds1 | subnet-07b34c0a926d0086f | Available | vpc-05dd91c8b9f878c1f   my-vpc   | 10.0.4.0/24    |
| <input type="checkbox"/> | private-subnet-rds2 | subnet-0a3a00347f4fffa3d | Available | vpc-05dd91c8b9f878c1f   my-vpc   | 10.0.5.0/24    |

## Create internet gateway

Name:my-igw1

VPC > Internet gateways > Create internet gateway

### Create internet gateway Info

An internet gateway is a virtual router that connects a VPC to the internet. To create a new internet gateway specify the name for the gateway below.

#### Internet gateway settings

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

**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.

| Key                               | Value - optional  |
|-----------------------------------|---|
| <input type="text" value="Name"/> | <input type="text" value="my-igw1"/> <span>X</span> <span>Remove</span> |
| <span>Add new tag</span>          |   |

You can add 49 more tags.

Cancel Create internet gateway

The following internet gateway was created: igw-04de8af37b28b2fbe - my-igw1. You can now attach to a VPC to enable the VPC to communicate with the internet. Attach to a VPC

VPC > Internet gateways > igw-04de8af37b28b2fbe

### igw-04de8af37b28b2fbe / my-igw1

Actions ▾

| Details <small>Info</small>   |                                      |
|---|--------------------------------------|
| Internet gateway ID<br><input type="text" value="igw-04de8af37b28b2fbe"/> | State<br><small>Detached</small>     |
| VPC ID<br>-   | Owner<br><small>058264302028</small> |

**Tags** Manage tags < 1 > ⚙

| Key  | Value   |
|------|---------|
| Name | my-igw1 |

Internet gateway attach to vpc

The following internet gateway was created: igw-04de8af37b28b2fbe - my-igw1. You can now attach to a VPC to enable the VPC to communicate with the internet.

[Attach to a VPC](#)

VPC > Internet gateways > Attach to VPC (igw-04de8af37b28b2fbe)

### Attach to VPC (igw-04de8af37b28b2fbe) [Info](#)

**VPC**  
Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below.

**Available VPCs**  
Attach the internet gateway to this VPC.

Q vpc-05dd91c8b9f878c1f X

▶ AWS Command Line Interface command

Cancel **Attach internet gateway**

Internet gateway igw-04de8af37b28b2fbe successfully attached to vpc-05dd91c8b9f878c1f

Notifications 0 0 2 0 0 0 ▾

VPC > Internet gateways > igw-04de8af37b28b2fbe

### igw-04de8af37b28b2fbe / my-igw1

[Actions](#) ▾

| Details <a href="#">Info</a>                             |                          |
|--|--------------------------|
| Internet gateway ID<br>igw-04de8af37b28b2fbe             | State<br><b>Attached</b> |
| VPC ID<br><a href="#">vpc-05dd91c8b9f878c1f   my-vpc</a> | Owner<br>058264302028    |

**Tags**

Q Search tags

| Key  | Value   |
|------|---------|
| Name | my-igw1 |

Manage tags < 1 > ⌂

## Create NAT gateway

Name:NGW-1

### NAT gateway settings

#### Name - optional

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

NGW-1

The name can be up to 256 characters long.

#### Subnet

Select a subnet in which to create the NAT gateway.

subnet-05dcad935158a22f9 (private-subnet1) ▾

#### Connectivity type

Select a connectivity type for the NAT gateway.

- Public
- Private

i Private NAT gateway traffic can't reach the internet.

| nat-021b8c0a1f96a4253   NGW-1 was created successfully.  |  |  |   |
|--|--|--|---|
| <a href="#">VPC</a> > <a href="#">NAT gateways</a> > nat-021b8c0a1f96a4253                             |  |  |   |
| nat-021b8c0a1f96a4253 / NGW-1 <span style="float: right;">Actions ▾</span>                             |  |  |   |
| <b>Details</b>   |  |  |   |
| NAT gateway ID<br><a href="#">nat-021b8c0a1f96a4253</a>  | Connectivity type<br>Private   | State<br><span style="color: #ccc;">Pending</span>                     | State message <a href="#">Info</a><br>- |
| NAT gateway ARN<br><a href="#">arn:aws:ec2:us-east-1:058264302028:natgateway/nat-021b8c0a1f96a4253</a> | Primary public IPv4 address<br>-                                     | Primary private IPv4 address<br>-                                      | Primary network interface ID<br>-       |
| VPC<br><a href="#">vpc-05dd91c8b9f878c1f / my-vpc</a>  | Subnet<br><a href="#">subnet-05dcad935158a22f9 / private-subnet1</a> | Created<br><a href="#">Sunday, April 21, 2024 at 00:21:04 GMT+5:30</a> | Deleted<br>-                            |

## Create route table

Name:public-route

Services [Alt+F5]

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.

**VPC**  
The VPC to use for this route table.

#### 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="public-route"/> <span style="color: red;">X</span> |
| <a href="#">Add new tag</a>       |  |

You can add 49 more tags.

[Cancel](#) Create route table

Route table rtb-081769d18f3c0d348 | public-route was created successfully.

VPC > Route tables > rtb-081769d18f3c0d348

### rtb-081769d18f3c0d348 / public-route

Actions ▾

| Details        |                                | Info                         |              |
|----------------|--------------------------------|------------------------------|--------------|
| Route table ID | rtb-081769d18f3c0d348          | Main                         | No           |
| VPC            | vpc-05dd91c8b9f878c1f   my-vpc | Owner ID                     | 058264302028 |
|                |                                | Explicit subnet associations | -            |
|                |                                | Edge associations            | -            |

**Routes** | Subnet associations | Edge associations | Route propagation | Tags

**Routes (1)**

Filter routes

| Destination | Target | Status | Propagated |
|-------------|--------|--------|------------|
| 10.0.0.0/16 | local  | Active | No         |

Click on the public-route and go to actions select edit routes

Route tables (1/3) Info

Find resources by attribute or tag

| Name   | Route table ID        | Explicit subnet assoc... | Edge associations |
|--|-----------------------|--------------------------|-------------------|
| -  | rtb-0075bc5ee19a87087 | -                        | -                 |
| -  | rtb-04b41ef7c98daf9cd | -                        | -                 |
| <input checked="" type="checkbox"/> public-route | rtb-081769d18f3c0d348 | -                        | -                 |

Actions ▾

- [Create route table](#)
- [View details](#)
- [Set main route table](#)
- [Edit subnet associations](#)
- [Edit edge associations](#)
- [Edit route propagation](#)
- [Edit routes](#)
- [Manage tags](#)
- [Delete route table](#)

Add internet gateway

VPC > Route tables > rtb-081769d18f3c0d348 > Edit routes

### Edit routes

| Destination  | Target                  | Status | Propagated |
|--------------|-------------------------|--------|------------|
| 10.0.0.0/16  | local                   | Active | No         |
| Q_ 0.0.0.0/0 | Internet Gateway        | -      | No         |
|              | Q_ igw-04de8af37b28b2fb | X      |            |

Add route

Cancel Preview Save changes

⌚ Updated routes for rtb-081769d18f3c0d348 / public-route successfully

► Details

VPC > Route tables > rtb-081769d18f3c0d348

### rtb-081769d18f3c0d348 / public-route

Actions ▾

| Details                        |                                       | Info                         |                   |
|--------------------------------|---------------------------------------|------------------------------|-------------------|
| Route table ID                 | Main                                  | Explicit subnet associations | Edge associations |
| rtb-081769d18f3c0d348          | <input type="checkbox"/> No           | -                            | -                 |
| VPC                            | Owner ID                              | Edge associations            |                   |
| vpc-05dd91c8b9f878c1f   my-vpc | <input type="checkbox"/> 058264302028 | -                            |                   |

Routes Subnet associations Edge associations Route propagation Tags

Routes (2)

Filter routes

| Destination | Target                | Status | Propagated |
|-------------|-----------------------|--------|------------|
| 0.0.0.0/0   | igw-04de8af37b28b2fbe | Active | No         |
| 10.0.0.0/16 | local                 | Active | No         |

Both ▾ Edit routes < 1 > ⚙️

## Create route table

Name:private

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.

private-route

VPC  
 The VPC to use for this route table.

vpc-05dd91c8b9f878c1f (my-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                                 | Value - <i>optional</i>                      |
|-------------------------------------|--|
| <input type="text" value="Name"/> X | <input type="text" value="private-route"/> X |
| <a href="#">Add new tag</a>         |  |

You can add 49 more tags.

[Cancel](#) [Create route table](#)

Route table rtb-0b23172a2a33583ad | private-route was created successfully.

VPC > Route tables > rtb-0b23172a2a33583ad

rtb-0b23172a2a33583ad / private-route [Actions](#)

#### Details Info

|   |                          |                                   |                        |
|---|--------------------------|-----------------------------------|------------------------|
| Route table ID<br>rtb-0b23172a2a33583ad | Main<br>No               | Explicit subnet associations<br>- | Edge associations<br>- |
| VPC<br>vpc-05dd91c8b9f878c1f   my-vpc   | Owner ID<br>058264302028 |                                   |                        |

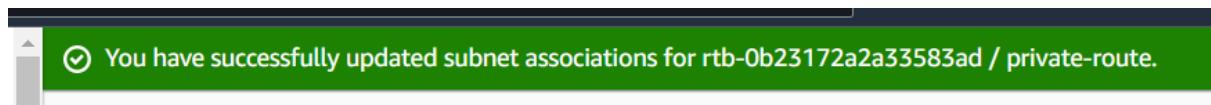
[Routes](#) [Subnet associations](#) [Edge associations](#) [Route propagation](#) [Tags](#)

#### Routes (1)

| Destination | Target | Status | Propagated |
|-------------|--------|--------|------------|
| 10.0.0.0/16 | local  | Active | No         |

[Both](#) [Edit routes](#)

Select private-route click on the subnet associations after that click on the edit subnet associations select the private-subnet-1, private-subnet-2, private-subnet-rds-1 and private-subnet-rds-2 finally click on the save associations.



VPC > Route tables > rtb-0b23172a2a33583ad > Edit subnet associations

### Edit subnet associations

Change which subnets are associated with this route table.

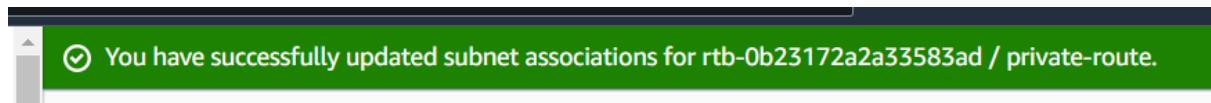
**Available subnets (4/6)**

| Name                | Subnet ID                | IPv4 CIDR   | IPv6 CIDR | Route table ID               |
|---------------------|--------------------------|-------------|-----------|------------------------------|
| public-subnet 1     | subnet-026e8bb56c2138f5b | 10.0.0.0/24 | -         | Main (rtb-04b41ef7c98daf9cd) |
| public-subnet2      | subnet-034d011e6d62b5aa4 | 10.0.1.0/24 | -         | Main (rtb-04b41ef7c98daf9cd) |
| private-subnet1     | subnet-05dcad935158a22f9 | 10.0.2.0/24 | -         | Main (rtb-04b41ef7c98daf9cd) |
| private-subnet2     | subnet-0e9569786ab72e57d | 10.0.3.0/24 | -         | Main (rtb-04b41ef7c98daf9cd) |
| private-subnet-rds1 | subnet-07b34c0a926d0086f | 10.0.4.0/24 | -         | Main (rtb-04b41ef7c98daf9cd) |
| private-subnet-rds2 | subnet-0a3a00347f4fffa3d | 10.0.5.0/24 | -         | Main (rtb-04b41ef7c98daf9cd) |

**Selected subnets**

- subnet-05dcad935158a22f9 / private-subnet1 X
- subnet-0e9569786ab72e57d / private-subnet2 X
- subnet-07b34c0a926d0086f / private-subnet-rds1 X
- subnet-0a3a00347f4fffa3d / private-subnet-rds2 X

Cancel **Save associations**



Select public-route click on the subnet associations after that click on the edit subnet associations select the public-subnet-1 and public-subnet-2 finally click on the save associations.

VPC > Route tables > rtb-081769d18f3c0d348 > Edit subnet associations

### Edit subnet associations

Change which subnets are associated with this route table.

| Available subnets (2/6)             |                     |                          |             |           |                                       |
|-------------------------------------|---------------------|--------------------------|-------------|-----------|---------------------------------------|
|                                     | Name                | Subnet ID                | IPv4 CIDR   | IPv6 CIDR | Route table ID                        |
| <input checked="" type="checkbox"/> | public-subnet 1     | subnet-026e8bb56c2138f5b | 10.0.0.0/24 | -         | Main (rtb-04b41ef7c98daf9cd)          |
| <input checked="" type="checkbox"/> | public-subnet2      | subnet-034d011e6d62b5aa4 | 10.0.1.0/24 | -         | Main (rtb-04b41ef7c98daf9cd)          |
| <input type="checkbox"/>            | private-subnet1     | subnet-05dcad935158a22f9 | 10.0.2.0/24 | -         | rtb-0b23172a2a33583ad / private-route |
| <input type="checkbox"/>            | private-subnet2     | subnet-0e9569786ab72e57d | 10.0.3.0/24 | -         | rtb-0b23172a2a33583ad / private-route |
| <input type="checkbox"/>            | private-subnet-rds1 | subnet-07b34c0a926d0086f | 10.0.4.0/24 | -         | rtb-0b23172a2a33583ad / private-route |
| <input type="checkbox"/>            | private-subnet-rds2 | subnet-0a3a00347f4fffa5d | 10.0.5.0/24 | -         | rtb-0b23172a2a33583ad / private-route |

**Selected subnets**

- subnet-026e8bb56c2138f5b / public-subnet 1
- subnet-034d011e6d62b5aa4 / public-subnet2

**Actions:** Cancel | **Save associations**

You have successfully updated subnet associations for rtb-081769d18f3c0d348 / public-route.

### Route tables (1/4) Info

Find resources by attribute or tag

| Name                                | Route table ID        | Explicit subnet associations | Edge associations | Main | VPC                  |                      |
|-------------------------------------|-----------------------|------------------------------|-------------------|------|----------------------|----------------------|
| <input type="checkbox"/>            | rtb-0075bc5ee19a87087 | -                            | -                 | Yes  | vpc-0edc30e9f2c48c90 |                      |
| <input type="checkbox"/>            | rtb-04b41ef7c98daf9cd | -                            | -                 | Yes  | vpc-05dd91c8b9f878c1 |                      |
| <input checked="" type="checkbox"/> | public-route          | rtb-081769d18f3c0d348        | 2 subnets         | -    | No                   | vpc-05dd91c8b9f878c1 |
| <input type="checkbox"/>            | private-route         | rtb-0b23172a2a33583ad        | 4 subnets         | -    | No                   | vpc-05dd91c8b9f878c1 |

## Add NAT Gateway to private route

VPC > Route tables > rtb-0b23172a2a33583ad > Edit routes

### Edit routes

| Destination | Target                | Status | Propagated |
|-------------|-----------------------|--------|------------|
| 10.0.0.0/16 | local                 | Active | No         |
| 0.0.0.0/0   | NAT Gateway           | -      | No         |
|             | nat-021b8c0a1f96a4253 |        |            |

**Actions:** Add route | Remove | Cancel | Preview | **Save changes**

⌚ Updated routes for rtb-0b23172a2a33583ad / private-route successfully

► Details

VPC > Route tables > rtb-0b23172a2a33583ad

## rtb-0b23172a2a33583ad / private-route

**Actions ▾**

| Details                                   |                                | Info     |              |
|---|--------------------------------|----------|--------------|
| Route table ID                            | rtb-0b23172a2a33583ad          | Main     | No           |
| VPC                                       | vpc-05dd91c8b9f878c1f   my-vpc | Owner ID | 058264302028 |
| Explicit subnet associations<br>4 subnets |                                |          |              |
| Edge associations<br>-                    |                                |          |              |

**Routes** **Subnet associations** **Edge associations** **Route propagation** **Tags**

**Routes (2)**

| Filter routes |                       | Both   |            | Edit routes |  |
|---------------|-----------------------|--------|------------|-------------|--|
| Destination   | Target                | Status | Propagated |             |  |
| 0.0.0.0/0     | nat-021b8c0a1f96a4253 | Active | No         |             |  |
| 10.0.0.0/16   | local                 | Active | No         |             |  |

Select public-subnet 1 ,go to actions and click on edit subnet settings

Finally click on the Enable auto-assign public IPv4 address. Same process to all the subnets.

**Subnets (1/12) Info**

**Actions ▾** **Create subnet**

**Find resources by attribute or tag**

| Name  | Subnet ID                | State     | VPC                       |
|---|--------------------------|-----------|---------------------------|
| -   | subnet-060af02a40dbb08d1 | Available | vpc-0edc30e9f2c48c900   d |
| -   | subnet-0766ee7d97c7b9a08 | Available | vpc-0edc30e9f2c48c900   d |
| -   | subnet-08b3896b9217119ed | Available | vpc-0edc30e9f2c48c900   d |
| -   | subnet-0954da2842cd7688c | Available | vpc-0edc30e9f2c48c900   d |
| -   | subnet-00c838dc6e610beea | Available | vpc-0edc30e9f2c48c900   d |
| -   | subnet-0a3d329ab7558eb5f | Available | vpc-0edc30e9f2c48c900   d |
| <input checked="" type="checkbox"/> public-subnet 1 | subnet-026e8bb56c2138f5b | Available | vpc-05dd91c8b9f878c1f   n |

**Actions ▾**

- Create flow log**
- Edit subnet settings** (highlighted)
- Edit IPv6 CIDRs**
- Edit network ACL association**
- Edit route table association**
- Edit CIDR reservations**
- Share subnet**
- Manage tags**
- Delete subnet**

## Edit subnet settings Info

### Subnet

| Subnet ID                                | Name                            |
|--|---------------------------------|
| <a href="#">subnet-026e8bb56c2138f5b</a> | <a href="#">public-subnet 1</a> |

### Auto-assign IP settings Info

Enable AWS to automatically assign a public IPv4 or IPv6 address to a new primary network interface for an instance in this subnet.

- Enable auto-assign public IPv4 address Info

⌚ You have successfully changed subnet settings:

- Enable auto-assign public IPv4 address

Create security group:1

Name:my-sg1

VPC > Security Groups > Create security group

### 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  
 Name cannot be edited after creation.

Description Info

VPC Info

**Inbound rules Info**

| Type <small>Info</small> | Protocol <small>Info</small> | Port range <small>Info</small> | Source <small>Info</small>                   | Description - optional <small>Info</small>                            |
|--------------------------|------------------------------|--------------------------------|--|---|
| SSH                      | TCP                          | 22                             | Anywhere... <input type="button" value="▼"/> | <input type="text" value="0.0.0.0"/> <input type="button" value="X"/> |
| HTTP                     | TCP                          | 80                             | Anywhere... <input type="button" value="▼"/> | <input type="text" value="0.0.0.0"/> <input type="button" value="X"/> |

Security group (sg-012f91b94932fd37d | my-sg1) was created successfully

► Details

VPC > Security Groups > sg-012f91b94932fd37d - my-sg1

Actions ▼

**Details**

|                               |   |  |                                 |
|-------------------------------|---|--|---------------------------------|
| Security group name<br>my-sg1 | Security group ID<br>sg-012f91b94932fd37d   | Description<br>nothing                     | VPC ID<br>vpc-05dd91c8b9f878c1f |
| Owner<br>058264302028         | Inbound rules count<br>2 Permission entries | Outbound rules count<br>1 Permission entry |                                 |

**Inbound rules (2)**

| <input type="checkbox"/> | Name | Security group rule... | IP version | Type | Protocol | Port range | Source    | Description |
|--------------------------|------|------------------------|------------|------|----------|------------|-----------|-------------|
| <input type="checkbox"/> | -    | sgr-01f4b66de7c4fb59a  | IPv4       | SSH  | TCP      | 22         | 0.0.0.0/0 | -           |
| <input type="checkbox"/> | -    | sgr-09c9bcd9bf11736544 | IPv4       | HTTP | TCP      | 80         | 0.0.0.0/0 | -           |

Create secur

Create security group:2

Name:my-sg2

VPC > Security Groups > Create security group

### 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 <small>Info</small> | <input type="text" value="my-sg2"/>                         |
| Name cannot be edited after creation.   |   |
| Description <small>Info</small>         | <input type="text" value="nothing"/>                        |
| VPC <small>Info</small>                 | <input type="text" value="vpc-05dd91c8b9f878c1f (my-vpc)"/> |

#### Inbound rules Info

| Type <small>Info</small> | Protocol <small>Info</small> | Port range <small>Info</small> | Source <small>Info</small> | Description - optional <small>Info</small>  |
|--------------------------|------------------------------|--------------------------------|----------------------------|---|
| SSH                      | TCP                          | 22                             | Anywhere... ▾              | <input type="text" value="0.0.0.0"/> <span style="border: 1px solid #ccc; padding: 2px;">X</span> |
| HTTP                     | TCP                          | 80                             | Anywhere... ▾              | <input type="text" value="0.0.0.0"/> <span style="border: 1px solid #ccc; padding: 2px;">X</span> |

VPC > Security Groups > Create security group

### 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 <small>Info</small> | <input type="text" value="my-sg2"/>                         |
| Name cannot be edited after creation.   |   |
| Description <small>Info</small>         | <input type="text" value="nothing"/>                        |
| VPC <small>Info</small>                 | <input type="text" value="vpc-05dd91c8b9f878c1f (my-vpc)"/> |

#### Inbound rules Info

| Type <small>Info</small> | Protocol <small>Info</small> | Port range <small>Info</small> | Source <small>Info</small> | Description - optional <small>Info</small>  |
|--------------------------|------------------------------|--------------------------------|----------------------------|---|
| SSH                      | TCP                          | 22                             | Anywhere... ▾              | <input type="text" value="0.0.0.0"/> <span style="border: 1px solid #ccc; padding: 2px;">X</span> |
| HTTP                     | TCP                          | 80                             | Anywhere... ▾              | <input type="text" value="0.0.0.0"/> <span style="border: 1px solid #ccc; padding: 2px;">X</span> |

VPC > Security Groups > sg-0a2d6ad470ee0a609 - my-sg2

### sg-0a2d6ad470ee0a609 - my-sg2

Actions ▾

#### Details

|   |   |                                      |  |
|---|---|--------------------------------------|--|
| Security group name                       | Security group ID                                 | Description                          | VPC ID   |
| <input type="text" value="my-sg2"/>       | <input type="text" value="sg-0a2d6ad470ee0a609"/> | <input type="text" value="nothing"/> | <input type="text" value="vpc-05dd91c8b9f878c1f"/> |
| Owner                                     | Inbound rules count                               | Outbound rules count                 |  |
| <input type="text" value="058264302028"/> | 2 Permission entries                              | 1 Permission entry                   |  |

- Inbound rules
- Outbound rules
- Tags

#### Inbound rules (2)

| <input type="checkbox"/> | Name | Security group rule... | IP version | Type | Protocol | Port range | Source    | Description |
|--------------------------|------|------------------------|------------|------|----------|------------|-----------|-------------|
| <input type="checkbox"/> | -    | sgr-066aa351cf4a7bc20  | IPv4       | SSH  | TCP      | 22         | 0.0.0.0/0 | -           |
| <input type="checkbox"/> | -    | sgr-0cbe7510d58b0acea  | IPv4       | HTTP | TCP      | 80         | 0.0.0.0/0 | -           |

## Create launch template:1

Name: public-template

[EC2](#) > [Launch templates](#) > Create launch template

### Create launch template

Creating a launch template allows you to create a saved instance configuration that can be reused, shared and launched later time. Templates can have multiple versions.

#### Launch template name and description

Launch template name - *required*

public-template

Must be unique to this account. Max 128 chars. No spaces or special characters like '&', '\*', '@'.

Template version description

nothing

Max 255 chars

Auto Scaling guidance | [Info](#)

Select this if you intend to use this template with EC2 Auto Scaling

- Provide guidance to help me set up a template that I can use with EC2 Auto Scaling

► [Template tags](#)

## Launch template contents

Specify the details of your launch template below. Leaving a field blank will result in the field not being included in the launch template.

### ▼ Application and OS Images (Amazon Machine Image) [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

 *Search our full catalog including 1000s of application and OS images*

#### Quick Start

Don't include  
in launch  
template

Amazon  
Linux  


macOS  


Ubuntu  


Windows  


Red H  




[Browse more AMIs](#)

Including AMIs from  
AWS, Marketplace and  
the Community

#### Amazon Machine Image (AMI)

Amazon Linux 2023 AMI

ami-04e5276ebb8451442 (64-bit (x86), uefi-preferred) / ami-09e060bed64ca0c04 (64-bit (Arm), uefi)  
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

### ▼ Network settings [Info](#)

Subnet [Info](#)



 [Create new subnet](#) 

When you specify a subnet, a network interface is automatically added to your template.

Firewall (security groups) [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

[Select existing security group](#)

[Create security group](#)

Security groups [Info](#)



my-sg1 sg-012f91b94932fd37d   
VPC: vpc-05dd91c8b9f878c1f

 [Compare security group rules](#)

### ▼ Advanced network configuration

No network interfaces are currently included in this template. Add a network interface to include it in the launch template.

 Success

Successfully created [public-template\(lt-07fc54b4013e3f1fc\)](#).

## Create launch template:2

Name:private-template

## Create launch template

Creating a launch template allows you to create a saved instance configuration that can be reused, shared and launched at a later time. Templates can have multiple versions.

### Launch template name and description

Launch template name - *required*

private-template

Must be unique to this account. Max 128 chars. No spaces or special characters like '&', '\*', '@'.

Template version description

nothing

Max 255 chars

Auto Scaling guidance | [Info](#)

Select this if you intend to use this template with EC2 Auto Scaling

- Provide guidance to help me set up a template that I can use with EC2 Auto Scaling

► [Template tags](#)

► [Source template](#)

## ▼ Application and OS Images (Amazon Machine Image) [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

 *Search our full catalog including 1000s of application and OS images*

Recents

Quick Start

Don't include  
in launch  
template

Amazon  
Linux  


macOS  


Ubuntu  


Windows  


Red H  




Browse more AMIs

Including AMIs from  
AWS, Marketplace and  
the Community

Amazon Machine Image (AMI)

Amazon Linux 2023 AMI

ami-04e5276ebb8451442 (64-bit (x86), uefi-preferred) / ami-09e060bed64ca0c04 (64-bit (Arm), uefi)  
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible



Instance type

t2.micro

Family: t2 1 vCPU 1 GiB Memory Current generation: true  
On-Demand Windows base pricing: 0.0162 USD per Hour  
On-Demand SUSE base pricing: 0.0116 USD per Hour  
On-Demand RHEL base pricing: 0.0716 USD per Hour  
On-Demand Linux base pricing: 0.0116 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

vcube

[Create new key pair](#)



## ▼ Network settings [Info](#)

Subnet [Info](#)

Don't include in launch template

[Create new subnet](#)



When you specify a subnet, a network interface is automatically added to your template.

Firewall (security groups) [Info](#)

▼ Network settings [Info](#)

Subnet | [Info](#)

Don't include in launch template

When you specify a subnet, a network interface is automatically added to your template.

Firewall (security groups) | [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Select existing security group     Create security group

Security groups [Info](#)

Select security groups

my-sg2 sg-0a2d6ad470ee0a609 X  
VPC: vpc-05dd91c8b9f878c1f

[Compare security group rules](#)

► Advanced network configuration .

EC2 > [Launch templates](#) > Create launch template

Success

Successfully created [private-template\(lt-090ef6fd3acdd5d12\)](#).

Create auto scaling group:1

Name: auto-scaling-public

EC2 > Auto Scaling groups > Create Auto Scaling group

Step 1  
Choose launch template

Step 2  
Choose instance launch options

Step 3 - optional  
Configure advanced options

Step 4 - optional  
Configure group size and scaling

Step 5 - optional  
Add notifications

Step 6 - optional  
Add tags

Step 7  
Review

## Choose launch template Info

Specify a launch template that contains settings common to all EC2 instances that are launched by this Auto Scaling group.

**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

For accounts created after May 31, 2023, the EC2 console only supports creating Auto Scaling groups with launch templates. Creating Auto Scaling groups with launch configurations is not recommended but still available via the CLI and API until December 31, 2023.

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  
 ▼

## 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.

▼

[Create a VPC](#)

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

▼

X

X

[Create a subnet](#)

## Configure advanced options - optional Info

Integrate your Auto Scaling group with other services to distribute network traffic across multiple servers using a load balancer or to establish service-to-service communications using VPC Lattice. You can also set options that give you more control over 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

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

Attach to an existing load balancer

Choose from your existing load balancers.

Attach to a new load balancer

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

### Attach to a new load balancer

Define a new load balancer to create for attachment to this Auto Scaling group.

#### Load balancer type

Choose from the load balancer types offered below. Type selection cannot be changed after the load balancer is created. If you need a different type of load balancer than those offered here, visit the Load Balancing console. [\[?\]](#)

Application Load Balancer

HTTP, HTTPS

Network Load Balancer

TCP, UDP, TLS

#### Load balancer type

Choose from the load balancer types offered below. Type selection cannot be changed after the load balancer is created. If you need a different type of load balancer than those offered here, visit the [Load Balancing console](#).

Application Load Balancer  
HTTP, HTTPS

Network Load Balancer  
TCP, UDP, TLS

#### Load balancer name

Name cannot be changed after the load balancer is created.

auto-scaling-public-1

#### Load balancer scheme

Scheme cannot be changed after the load balancer is created.

Internal

Internet-facing

#### Network mapping

Your new load balancer will be created using the same VPC and Availability Zone selections as your Auto Scaling group. You can select different subnets and add subnets from additional Availability Zones.

##### VPC

vpc-05dd91c8b9f878c1f

my-vpc

##### Availability Zones and subnets

You must select a single subnet for each Availability Zone enabled. Only public subnets are available for selection to support DNS resolution.

us-east-1b

subnet-034d011e6d62b5aa4

us-east-1a

subnet-026e8bb56c2138f5b

#### Listeners and routing

If you require secure listeners, or multiple listeners, you can configure them from the [Load Balancing console](#) after your load balancer is created.

##### Protocol

##### Port

##### Default routing (forward to)

HTTP

80

Create a target group



New target group name

An instance target group with default settings will be created.

auto-scaling-public-1

## 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

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

Attach to VPC Lattice service

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

Create new VPC Lattice service 

## Health checks

Health checks increase availability by replacing unhealthy instances. When you use multiple health checks, all are evaluated, and if at least one fails, instance replacement occurs.

EC2 health checks

 Always enabled

Additional health check types - *optional* Info

Turn on Elastic Load Balancing health checks Recommended

Elastic Load Balancing monitors whether instances are available to handle requests. When it reports an unhealthy instance, EC2 Auto Scaling can replace it on its next periodic check.

Turn on VPC Lattice health checks

VPC Lattice can monitor whether instances are available to handle requests. If it considers a target as failed a health check, EC2 Auto Scaling replaces it after its next periodic check.

Health check grace period Info

This time period delays the first health check until your instances finish initializing. It doesn't prevent an instance from terminating when placed into a non-running state.

30 seconds

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

5

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.

| Auto Scaling groups (1) <a href="#">Info</a> |   |  |        |                                  |     |                         |                   |   |                     |   |
|--|---|--|--------|----------------------------------|-----|-------------------------|-------------------|---|---------------------|---|
|  |   | <a href="#">Launch configurations</a>                |        | <a href="#">Launch templates</a> |     | <a href="#">Actions</a> |                   | <a href="#">Create Auto Scaling group</a> |                     |   |
|  |   | <input type="text"/> Search your Auto Scaling groups |        |                                  |     |                         |                   | < 1 > <a href="#">Reset</a>               |                     |   |
| Name   | Launch template/configuration                     | Instances  | Status | Desired capacity                 | Min | Max                     | Availability zone | Created                                   | Last modified       | Actions                                     |
| <a href="#">auto-scaling-public</a>          | <a href="#">public-template</a>   Version Default | 2  | -      | 2                                | 2   | 5                       | us-east-...       | 2023-05-22 10:15:00                       | 2023-05-22 10:15:00 | <a href="#">Edit</a> <a href="#">Delete</a> |

## Create auto scaling group:2

Name: auto-scaling-private

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

Specify a launch template that contains settings common to all EC2 instances that are launched by this Auto Scaling group.

#### 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](#)

i For accounts created after May 31, 2023, the EC2 console only supports creating Auto Scaling groups with launch templates. Creating Auto Scaling groups with launch configurations is not recommended but still available via the CLI and API until December 31, 2023.

#### 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

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-05dd91c8b9f878c1f (my-vpc)  
10.0.0.0/16



Create a VPC

#### 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-east-1a | subnet-07b34c0a926d0086f (private-subnet-rds1)  
10.0.4.0/24



us-east-1b | subnet-0a3a00347f4fffa3d (private-subnet-rds2)  
10.0.5.0/24



us-east-1b | subnet-0e9569786ab72e57d (private-subnet2)  
10.0.3.0/24



us-east-1a | subnet-05dcad935158a22f9 (private-subnet1)  
10.0.2.0/24



Create a subnet

## Configure advanced options - optional Info

Integrate your Auto Scaling group with other services to distribute network traffic across multiple servers using a load balancer or to establish service-to-service communications using VPC Lattice. You can also set options that give you more control over 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

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

Attach to an existing load balancer

Choose from your existing load balancers.

Attach to a new load balancer

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

### Attach to a new load balancer

Define a new load balancer to create for attachment to this Auto Scaling group.

#### Load balancer type

Choose from the load balancer types offered below. Type selection cannot be changed after the load balancer is created. If you need a different type of load balancer than those offered here, visit the Load Balancing console. [\[?\]](#)

Application Load Balancer

HTTP, HTTPS

Network Load Balancer

TCP, UDP, TLS

#### Load balancer name

Name cannot be changed after the load balancer is created.

auto-scaling-private-1

#### Load balancer scheme

Scheme cannot be changed after the load balancer is created.

Internal

Internet-facing

#### Network mapping

Your new load balancer will be created using the same VPC and Availability Zone selections as your Auto Scaling group. You can select different subnets and add subnets from additional Availability Zones.

#### VPC

vpc-05dd91c8b9f878c1f [Edit](#)

my-vpc

#### Availability Zones and subnets

You must select a single subnet for each Availability Zone enabled. Only public subnets are available for selection to support DNS resolution.

us-east-1b

subnet-0a3a00347f4fffa3d



us-east-1a

subnet-05dcad935158a22f9



#### Listeners and routing

If you require secure listeners, or multiple listeners, you can configure them from the Load Balancing console [Edit](#) after your load balancer is created.

##### Protocol

##### Port

##### Default routing (forward to)

HTTP

80

Create a target group



New target group name

An instance target group with default settings will be created.

auto-scaling-private-1

#### Tags - optional

Consider adding tags to your load balancer. Tags enable you to categorize your AWS resources so you can more easily manage them.

Add tag

50 remaining

#### 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

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

##### Attach to VPC Lattice service

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

**EC2 health checks**

**Always enabled**

**Additional health check types - optional** | [Info](#)

Turn on Elastic Load Balancing health checks **Recommended**  
Elastic Load Balancing monitors whether instances are available to handle requests. When it reports an unhealthy instance, EC2 Auto Scaling can replace it on its next periodic check.

Turn on VPC Lattice health checks  
VPC Lattice can monitor whether instances are available to handle requests. If it considers a target as failed a health check, EC2 Auto Scaling replaces it after its next periodic check.

**Health check grace period** | [Info](#)  
This time period delays the first health check until your instances finish initializing. It doesn't prevent an instance from terminating when placed into a non-running state.  
 seconds

**Additional settings**

**Monitoring** | [Info](#)  
 Enable group metrics collection within CloudWatch

**Default instance warmup** | [Info](#)  
The amount of time that CloudWatch metrics for new instances do not contribute to the group's aggregated instance metrics, as their usage data is not reliable yet.  
 Enable default instance warmup

[Cancel](#) [Skip to review](#) [Previous](#) **Next**

Created automatically EC2 instance and we give name to instance .

| Instances (4) <a href="#">Info</a>                                      |                                  |                               |                         |                                  |                                |                                    |                   |               |  |  |
|---|----------------------------------|-------------------------------|-------------------------|----------------------------------|--------------------------------|------------------------------------|-------------------|---------------|--|--|
|   |                                  | <a href="#">C</a>             | <a href="#">Connect</a> | <a href="#">Instance state</a> ▾ | <a href="#">Actions</a> ▾      | <a href="#">Launch instances</a> ▾ |                   |               |  |  |
| <input type="text"/> Find Instance by attribute or tag (case-sensitive) |                                  |                               |                         |                                  |                                |                                    |                   |               |  |  |
| Instance state = running  | <input type="button" value="X"/> | <a href="#">Clear filters</a> |                         |                                  |                                |                                    |                   |               |  |  |
| <input type="checkbox"/>  | Name ↴                           | Instance ID                   | Instance state          | Instance type                    | Status check                   | Alarm status                       | Availability Zone | Public IPv4 D |  |  |
| <input type="checkbox"/>  | public1                          | i-0c4ead1db09f408ee           | <span>Running</span>    | t2.micro                         | <span>2/2 checks passed</span> | <a href="#">View alarms</a>        | us-east-1a        | -             |  |  |
| <input type="checkbox"/>  | public2                          | i-0edacfc3af69b734            | <span>Running</span>    | t2.micro                         | <span>2/2 checks passed</span> | <a href="#">View alarms</a>        | us-east-1b        | -             |  |  |
| <input type="checkbox"/>  | private2                         | i-0a03762537af84c9d           | <span>Running</span>    | t2.micro                         | <span>2/2 checks passed</span> | <a href="#">View alarms</a>        | us-east-1b        | -             |  |  |
| <input type="checkbox"/>  | private1                         | i-0178e17b301d26f2d           | <span>Running</span>    | t2.micro                         | <span>2/2 checks passed</span> | <a href="#">View alarms</a>        | us-east-1a        | -             |  |  |

Public 1 EC2 instance connect to web

## Connect to instance Info

Connect to your instance i-0c4ead1db09f408ee (public1) using any of these options

**EC2 Instance Connect**

Session Manager

SSH client

EC2 serial console

Instance ID

i-0c4ead1db09f408ee (public1)

Connection Type

Connect using EC2 Instance Connect

Connect using the EC2 Instance Connect browser-based client, with a public IPv4 address.

Connect using EC2 Instance Connect Endpoint

Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

Public IP address

18.212.221.239

Username

Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ec2-user.

ec2-user



**Note:** In most cases, the default username, ec2-user, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel

Connect

The screenshot shows a terminal window within the AWS CloudWatch interface. The terminal is running on an Amazon Linux 2023 instance. The session starts with a welcome banner:

```
'      #
~\_ ###
~~ \####\
~~  \###|
~~    \#/ ____ https://aws.amazon.com/linux/amazon-linux-2023
~~      V~' '-->
~~   /
~~.-./ -/
/_m/.'
```

Followed by the last login information and command history:

```
Last login: Sun Apr 21 12:34:06 2024 from 18.206.107.29
[ec2-user@ip-10-0-0-242 ~]$ sudo -i
[root@ip-10-0-0-242 ~]# vi vcube.pem
[root@ip-10-0-0-242 ~]# ls
vcube.pem
[root@ip-10-0-0-242 ~]# chmod 400 vcube.pem
[root@ip-10-0-0-242 ~]# ssh -i "vcube.pem" ec2-user@18.212.221.239
The authenticity of host '18.212.221.239 (18.212.221.239)' can't be established.
ED25519 key fingerprint is SHA256:6N24EULGkOGpLbfDZJ+xt9oWqsL9C13jdE8bvK5ISD9s.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '18.212.221.239' (ED25519) to the list of known hosts.
```

Then it shows another banner and command history:

```
'      #
~\_ ###
~~ \####\
~~  \###|
~~    \#/ ____ https://aws.amazon.com/linux/amazon-linux-2023
~~      V~' '-->
~~   /
~~.-./ -/
/_m/.'
```

Finally, it shows the last login information and a prompt:

```
Last login: Sun Apr 21 12:36:54 2024 from 18.206.107.27
[ec2-user@ip-10-0-0-242 ~]$ █
```

Public1 instance connect to private1 instance

Public2 instance connect to the web

Public2 instance connect to the private2 instance

## Create DATA BASE:

## Create database

### Choose a database creation method Info

#### Standard create

You set all of the configuration options, including ones for availability, security, backups, and maintenance.

#### Easy create

Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

### Engine options

#### Engine type Info

##### Aurora (MySQL Compatible)



##### Aurora (PostgreSQL Compatible)



##### MySQL



##### MariaDB



Amazon RDS Optimized Writes improves write throughput by up to 2x at no additional cost.

#### Engine Version

MySQL 8.0.35



#### Templates

Choose a sample template to meet your use case.

##### Production

Use defaults for high availability and fast, consistent performance.

##### Dev/Test

This instance is intended for development use outside of a production environment.

##### Free tier

Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS.

[Info](#)

#### Availability and durability

##### Deployment options [Info](#)

The deployment options below are limited to those supported by the engine you selected above.

###### Multi-AZ DB Cluster

Creates a DB cluster with a primary DB instance and two readable standby DB instances, with each DB instance in a different Availability Zone (AZ). Provides high availability, data redundancy and increases capacity to serve read workloads.

###### Multi-AZ DB instance (not supported for Multi-AZ DB cluster snapshot)

Creates a primary DB instance and a standby DB instance in a different AZ. Provides high availability and data redundancy, but the standby DB instance doesn't support connections for read workloads.

###### Single DB instance (not supported for Multi-AZ DB cluster snapshot)

Creates a single DB instance with no standby DB instances.

## Settings

### DB cluster identifier [Info](#)

Enter a name for your DB cluster. The name must be unique across all DB clusters owned by your AWS account in the current AWS Region.

database-1

The DB cluster identifier is case-insensitive, but is stored as all lowercase (as in "mydbcluster"). 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 cluster.

admin

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*  
RDS generates a password for you and manages it throughout its lifecycle using AWS Secrets Manager.

Self managed  
Create your own password or have RDS create a password that you manage.

i If you manage the master user credentials in AWS Secrets Manager, additional charges apply. See [AWS Secrets Manager pricing](#). Additionally, some RDS features aren't supported. See limitations [here](#).

### Select the encryption key [Info](#)

You can encrypt using the KMS key that Secrets Manager creates or a customer managed KMS key that you create.

aws/secretsmanager (default)



Add new key [\[ \]](#)

## Instance configuration

The DB instance configuration options below are limited to those supported by the engine that you selected above.

### DB instance class [Info](#)

### ▼ Hide filters

## Instance configuration

The DB instance configuration options below are limited to those supported by the engine that you selected above.

DB instance class [Info](#)

▼ Hide filters

Show instance classes that support Amazon RDS Optimized Writes [Info](#)

Amazon RDS Optimized Writes improves write throughput by up to 2x at no additional cost.

Standard classes (includes m classes)

Memory optimized classes (includes r classes)

Compute optimized classes (includes c classes)

db.m5d.large (supports Amazon RDS Optimized Writes)

2 vCPUs 8 GiB RAM Network: 4,750 Mbps 75 GB Instance Store

## Storage

Storage type [Info](#)

Provisioned IOPS SSD (io2) storage volumes are now available.

Provisioned IOPS SSD (io1)

Flexibility in provisioning I/O

Allocated storage [Info](#)

400

GiB

The minimum value is 100 GiB and the maximum value is 65,536 GiB

i After you modify the storage for a DB instance, the status of the DB instance will be in storage-optimization. Your instance will remain available as the storage-optimization operation completes. [Learn more](#) 

Provisioned IOPS [Info](#)

3000

IOPS

The minimum value is 1,000 IOPS and the maximum value is 256,000 IOPS. The IOPS to GiB ratio must be between 0.5 and 50

## 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**

Don't set up a connection to a compute resource for this database. You can manually set up a connection to a compute resource later.

**Connect to an EC2 compute resource**

Set up a connection to an EC2 compute resource for this database.

### Virtual private cloud (VPC) Info

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

my-vpc (vpc-05dd91c8b9f878c1f)

6 Subnets, 2 Availability Zones



Only VPCs with a corresponding DB subnet group are listed.

**⚠** The VPC subnets must be in 3 Availability Zones (AZs) for the Multi-AZ DB cluster. The current subnets are in **2 AZs (us-east-1b, us-east-1a)**. Add a subnet in a different AZ than the current subnets.

**Add new subnet**

**ⓘ** After a database is created, you can't change its VPC.

### DB subnet group Info

Choose the DB subnet group. The DB subnet group defines which subnets and IP ranges the DB cluster can use in the VPC that you selected.

Create new DB Subnet Group



### Public access Info

**Yes**

RDS assigns a public IP address to the cluster. Amazon EC2 instances and other resources outside of the VPC can connect to your cluster. Resources inside the VPC can also connect to the cluster. Choose one or more VPC security groups that specify which resources can

Create New DB Subnet Group

**Public access** [Info](#)

Yes  
RDS assigns a public IP address to the cluster. Amazon EC2 instances and other resources outside of the VPC can connect to your cluster. Resources inside the VPC can also connect to the cluster. Choose one or more VPC security groups that specify which resources can connect to the cluster.

No  
RDS doesn't assign a public IP address to the cluster. Only Amazon EC2 instances and other resources inside the VPC can connect to your cluster. Choose one or more VPC security groups that specify which resources can connect to the cluster.

**VPC security group (firewall)** [Info](#)  
Choose one or more VPC security groups to allow access to your database. Make sure that the security group rules allow the appropriate incoming traffic.

Choose existing  
Choose existing VPC security groups

Create new  
Create new VPC security group

**Existing VPC security groups**

Choose one or more options ▾

my-sg1 X my-sg2 X

**Certificate authority - optional** [Info](#)  
Using a server certificate provides an extra layer of security by validating that the connection is being made to an Amazon database. It does so by checking the server certificate that is automatically installed on all databases that you provision.

rds-ca-rsa2048-g1 (default)  
Expiry: May 26, 2061

If you don't select a certificate authority, RDS chooses one for you.

► Additional configuration

Successfully created database database-1

You can use settings from database-1 to simplify configuration of suggested database add-ons while we finish creating your DB for you.

View connection details X

Introducing Aurora I/O-Optimized

Aurora's I/O-Optimized is a new cluster storage configuration that offers predictable pricing for all applications and improved price-performance, with up to 40% costs savings for I/O-intensive applications.

RDS > Databases

Consider creating a Blue/Green Deployment to minimize downtime during upgrades

You may want to consider using Amazon RDS Blue/Green Deployments and minimize your downtime during upgrades. A Blue/Green Deployment provides a staging environment for changes to production databases. [RDS User Guide](#) [Aurora User Guide](#)

Databases (1)

| DB identifier | Status     | Role     | Engine          | Region & AZ | Size        | Recommendations | CPU | Current act |
|---------------|------------|----------|-----------------|-------------|-------------|-----------------|-----|-------------|
| database-1    | Backing-up | Instance | MySQL Community | us-east-1a  | db.t3.micro |                 |     | 0.00%       |

Group resources C Modify Actions ▾ Restore from S3 Create database

## Create DB subnet group

## Create DB subnet group

To create a new subnet group, give it a name and a description, and choose an existing VPC. You will then be able to add subnets related to that VPC.

### Subnet group details

#### Name

You won't be able to modify the name after your subnet group has been created.

Must contain from 1 to 255 characters. Alphanumeric characters, spaces, hyphens, underscores, and periods are allowed.

#### Description

#### VPC

Choose a VPC identifier that corresponds to the subnets you want to use for your DB subnet group. You won't be able to choose a different VPC identifier after your subnet group has been created.

### Add subnets

#### Availability Zones

Choose the Availability Zones that include the subnets you want to add.

#### Subnets

Choose the subnets that you want to add. The list includes the subnets in the selected Availability Zones.

⌚ Successfully created db-subnet. [View subnet group](#) X

⌚ Successfully created database database-1 View connection details X

RDS > Subnet groups

### Subnet groups (2)

[View connection details](#) X

| <input type="checkbox"/> | Name  | Description                             | Status                                      | VPC                   |
|--------------------------|---|---|---|-----------------------|
| <input type="checkbox"/> | <a href="#">db-subnet</a>                     | nothing                                 | <span style="color: green;">Complete</span> | vpc-05dd91c8b9f878c1f |
| <input type="checkbox"/> | <a href="#">default-vpc-05dd91c8b9f878c1f</a> | Created from the RDS Management Console | <span style="color: green;">Complete</span> | vpc-05dd91c8b9f878c1f |

DB snapshot:

## Take DB Snapshot

### Preferences

To take a DB Snapshot, choose a DB Instance and name your DB Snapshot.

#### Snapshot type

- DB instance
- DB cluster

#### DB instance

DB Instance identifier. This is the unique key that identifies a DB Instance.



#### Snapshot name

Identifier for the DB Snapshot.

Snapshot identifier is case insensitive, but stored as all lower-case, as in "mysnapshot". Cannot be null, empty, or blank. Must contain from 1 to 255 alphanumeric characters or hyphens. First character must be a letter. Cannot end with a hyphen or contain two consecutive hyphens.

[Cancel](#)

[Take snapshot](#)

⌚ Successfully created snapshot db-snapshot. [View details](#)



## Snapshots

[Manual](#) | [System](#) | [Shared with me](#) | [Public](#) | [Backup service](#) | [Exports in Amazon S3](#)

### Manual snapshots (1)

[C](#) [Actions](#) [Take snapshot](#)

< 1 >

| <input type="checkbox"/> Snapshot name | ▼ | DB instance or cluster | ▼ | Snapshot creation time | ▼ | DB Instance created time          |
|--|---|------------------------|---|------------------------|---|-----------------------------------|
| <a href="#">db-snapshot</a>            |   | database-1             |   | -                      |   | April 21, 2024, 18:52 (UTC+05:30) |