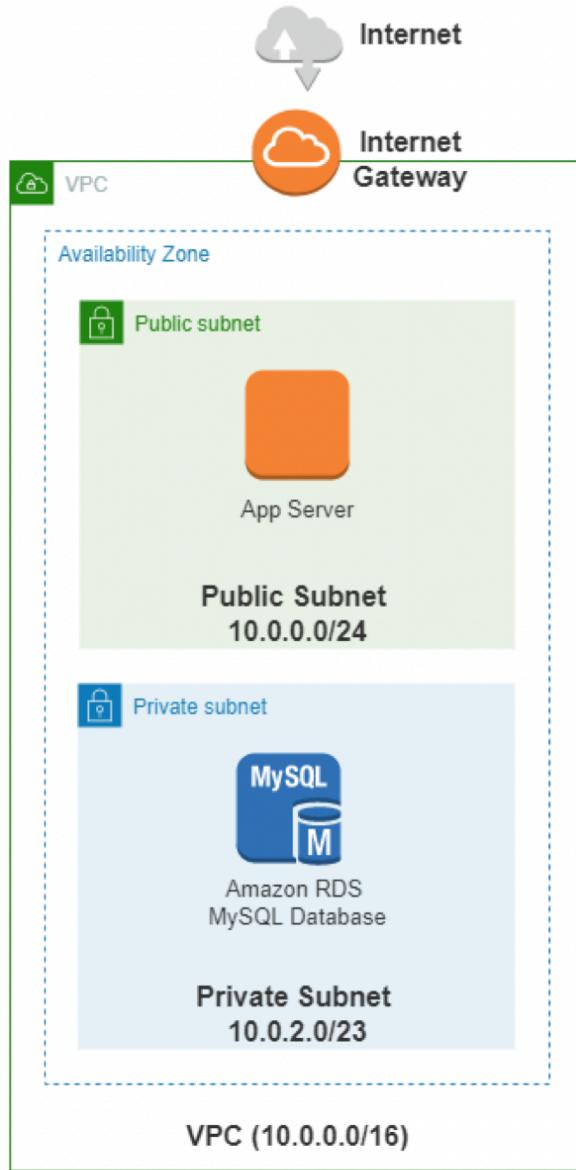


# INFRAESTRUCTURAS EN LA NUBE

Basado en el siguiente diagrama:



- 1. Creación y configuración de la VPC:** Creación de una nueva VPC en AWS y configuración conforme a los rangos CIDR que se indican en el diagrama de arquitectura mostrado anteriormente.

*Busco por palabra clave VPC en AWS para acceder a la configuración. Luego, me dirijo a mis VPC y creo una nueva, la que llamaré “VPC Master”.*

The screenshot shows the AWS VPC Details page for a VPC named "vpc-01e434594faebf08c / VPC Master". The page includes a navigation bar at the top with links to VPC, Your VPCs, and the specific VPC ID. On the right, there is an "Actions" dropdown menu. The main content area displays the VPC configuration in a tabular format under the "Details" tab. The configuration includes:

Details			
VPC ID vpc-01e434594faebf08c	State Available	DNS hostnames Disabled	DNS resolution Enabled
Tenancy Default	DHCP options set dopt-046b3f2e5a7ef6edf	Main route table rtb-0f552fff4952369e0	Main network ACL acl-03367025e994b5c4a
Default VPC No	IPv4 CIDR 10.0.0.0/16	IPv6 pool -	IPv6 CIDR -
Route 53 Resolver DNS Firewall rule groups -	Owner ID 279139187641		

2. **Creación y configuración de la subred privada:** Creación de una nueva subred privada dentro de la VPC desplegada en el punto anterior. Configuración conforme a los rangos CIDR que se indican en el diagrama de arquitectura.

*En el menú izquierdo, accedo a la opción “Subnets”. Creo una nueva subnet conforme al diagrama de arquitectura con IPv4 CIDR 10.0.2.0/23*

The screenshot shows the AWS VPC Subnets details page for a private subnet. The subnet ID is subnet-Of092438cf4c01537. The subnet ARN is arn:aws:ec2:us-east-2:279139187641:subnet/subnet-Of092438cf4c01537. The state is Available. The IPv4 CIDR is 10.0.2.0/23. The availability zone is us-east-2a. The network ACL is acl-03367025e994b5c4a. The default subnet is No. The customer-owned IPv4 pool is -. The IPv6-only setting is No. The owner is 279139187641. The subnet is associated with a VPC named vpc-01e434594faebf08c | VPC Master. It has 507 available IPv4 addresses. The route table is rtb-0f552fff4952369e0. Auto-assign public IPv4 address is set to No. Auto-assign IPv6 address is set to No. IPv4 CIDR reservations are set to -. Resource name DNS AAAA record is set to Disabled.

Details	
Subnet ID <a href="#">subnet-Of092438cf4c01537</a>	Subnet ARN <a href="#">arn:aws:ec2:us-east-2:279139187641:subnet/subnet-Of092438cf4c01537</a>
Available IPv4 addresses <a href="#">507</a>	State <span style="color: green;">Available</span>
VPC <a href="#">vpc-01e434594faebf08c   VPC Master</a>	IPv6 CIDR -
Auto-assign public IPv4 address No	Route table <a href="#">rtb-0f552fff4952369e0</a>
Outpost ID -	Network ACL <a href="#">acl-03367025e994b5c4a</a>
Hostname type IP name	Auto-assign customer-owned IPv4 address No
	IPv6 CIDR reservations -
	Resource name DNS AAAA record Disabled
	IPv4 CIDR <a href="#">10.0.2.0/23</a>
	Availability Zone <a href="#">us-east-2a</a>
	Availability Zone ID <a href="#">use2-az1</a>
	Default subnet No
	Customer-owned IPv4 pool -
	IPv6-only No
	Owner <a href="#">279139187641</a>

3. **Creación y configuración de la subred pública:** Creación de una nueva subred pública dentro de la VPC desplegada en el punto anterior. Configuración conforme a los rangos CIDR que se indican en el diagrama de arquitectura.

*Como en el paso anterior, en el menú izquierdo, accedo a la opción “Subnets”. Creo una nueva subnet conforme al diagrama de arquitectura con IPv4 CIDR 10.0.0.0/24*

subnet-00b3ff526678d67f8 / Public Subnet			
Actions ▾			
Details			
Subnet ID subnet-00b3ff526678d67f8	Subnet ARN arn:aws:ec2:us-east-2:279139187641:subnet/subnet-00b3ff526678d67f8	State Available	IPv4 CIDR 10.0.0.0/24
Available IPv4 addresses 250	IPv6 CIDR -	Availability Zone us-east-2a	Availability Zone ID use2-az1
VPC vpc-01e434594faebf08c   VPC Master	Route table rtb-0f52fff4952369e0	Network ACL acl-03367025e994b5c4a	Default subnet No
Auto-assign public IPv4 address Yes	Auto-assign IPv6 address No	Auto-assign customer-owned IPv4 address No	Customer-owned IPv4 pool -
Outpost ID -	IPv4 CIDR reservations -	IPv6 CIDR reservations -	IPv6-only No
Hostname type IP name	Resource name DNS A record Disabled	Resource name DNS AAAA record Disabled	Owner 279139187641

4. **Creación y configuración del Internet Gateway:** Creación y configuración de un Internet Gateway que permita la salida a Internet desde la VPC creada en el punto 1.

*En el menú izquierdo, accedo a la opción “Internet Gateways”. Creo un nuevo internet gateway nombrado “master-internet-gateway”. Luego de esto, aparece un popup que me permite asociar dicho internet gateway con mi VPC. Procedo a configurarlo.*

The screenshot shows the AWS VPC Internet Gateways details page. At the top, the navigation path is VPC > Internet gateways > igw-031f094e9324202bf. The main title is "igw-031f094e9324202bf / master-internet-gateway". On the right, there is an "Actions" dropdown menu. Below the title, there are two tabs: "Details" (selected) and "Info". The "Details" tab displays the following information:

Internet gateway ID igw-031f094e9324202bf	State Attached	VPC ID vpc-01e434594faebf08c   VPC Master	Owner 279139187641
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Below the "Details" tab is a "Tags" section. It includes a search bar labeled "Search tags", a "Manage tags" button, and a table with one tag entry:

Key	Value
Name	master-internet-gateway

## 5. Creación y configuración de una Route Table para la subred privada:

Creación de una nueva route table para la subred privada. Asociación de la nueva route table a la subred privada. No debe añadirse ninguna ruta adicional a las que se crean por defecto (ten en cuenta que la ruta por defecto que indica que el tráfico destinado a 10.0.0.0/16 será enrutado localmente es lo que permite que exista conectividad entre todas las subredes que se encuentran en la VPC).

*En el menú izquierdo, accedo a la opción “Route Tables”. Creo un nuevo route table nombrado “private-route-table” y lo asocio a mi VPC Master. No añado ninguna ruta adicional, como se indica en la solicitud.*

The screenshot shows the AWS VPC Route Tables interface. At the top, the navigation path is VPC > Route tables > rtb-0e9777fc4aeb9d075. The main title is "rtb-0e9777fc4aeb9d075 / private-route-table". On the right, there is an "Actions" dropdown menu with an information icon. Below the title, there are two tabs: "Details" (selected) and "Info". The "Details" tab displays the following information:

Route table ID	rtb-0e9777fc4aeb9d075	Main	No	Explicit subnet associations	-	Edge associations	-
VPC	vpc-01e434594faebf08c   VPC Master	Owner ID	279139187641				

Below the details, there are tabs for "Routes", "Subnet associations", "Edge associations", "Route propagation", and "Tags". The "Routes" tab is selected, showing a table with one route entry:

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No

At the bottom right of the routes table, there are buttons for "Edit routes", "Filter routes" (with a dropdown set to "Both"), and navigation arrows.

## 6. Creación y configuración de un Route Table para la subred pública:

Creación de una nueva route table para la subred pública. Asociación de la nueva route table a la subred pública. Creación de una nueva ruta que redireccione el tráfico dirigido a 0.0.0.0 hacia el Internet Gateway.

*En el menú izquierdo, accedo a la opción “Route Tables”. Creo un nuevo route table nombrado “public-route-table” y lo asocio a mi VPC Master. Luego, para que sea accesible desde internet, voy a “edit routes” y añado un nuevo Route con destino “0.0.0.0/0” cuyo Target es internet gateway y selecciono el anterior creado (master-internet-gateway)*

The screenshot shows the AWS VPC Route Tables interface. At the top, the navigation path is VPC > Route tables > rtb-045508f408b9843f7. The main title is "rtb-045508f408b9843f7 / public-route-table". On the right, there is an "Actions" dropdown menu. Below the title, there are two tabs: "Details" (selected) and "Info". The "Details" tab displays route table information: Route table ID (rtb-045508f408b9843f7), Main (No), VPC (vpc-01e434594faebf08c | VPC Master), Owner ID (279139187641), Explicit subnet associations (-), and Edge associations (-). Below the details, there are five tabs: "Routes" (selected), "Subnet associations", "Edge associations", "Route propagation", and "Tags". The "Routes" tab shows a table titled "Routes (2)". The columns are Destination, Target, Status, and Propagated. The first row has Destination 10.0.0.0/16, Target local, Status Active, and Propagated No. The second row has Destination 0.0.0.0/0, Target igw-031f094e9324202bf, Status Active, and Propagated No. There is also a "Edit routes" button and a pagination indicator showing page 1 of 1.