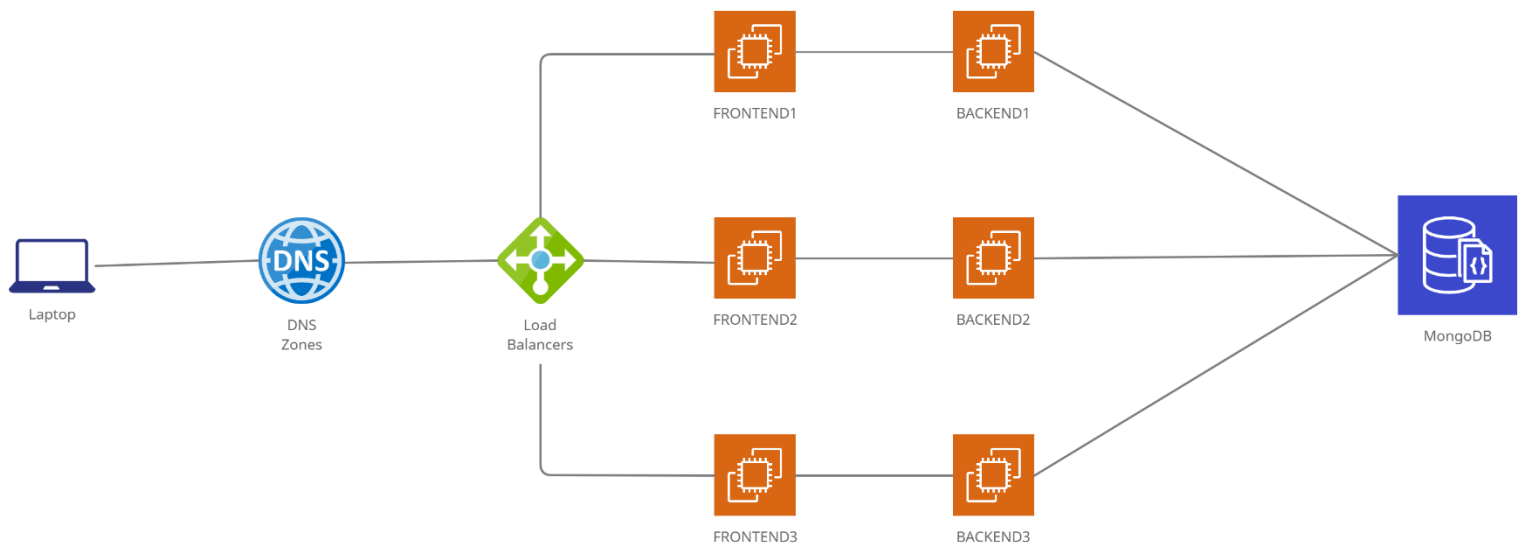




# MANUAL TECNICO

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## ARQUITECTURA



## SERVIDOR BASE DE DATOS

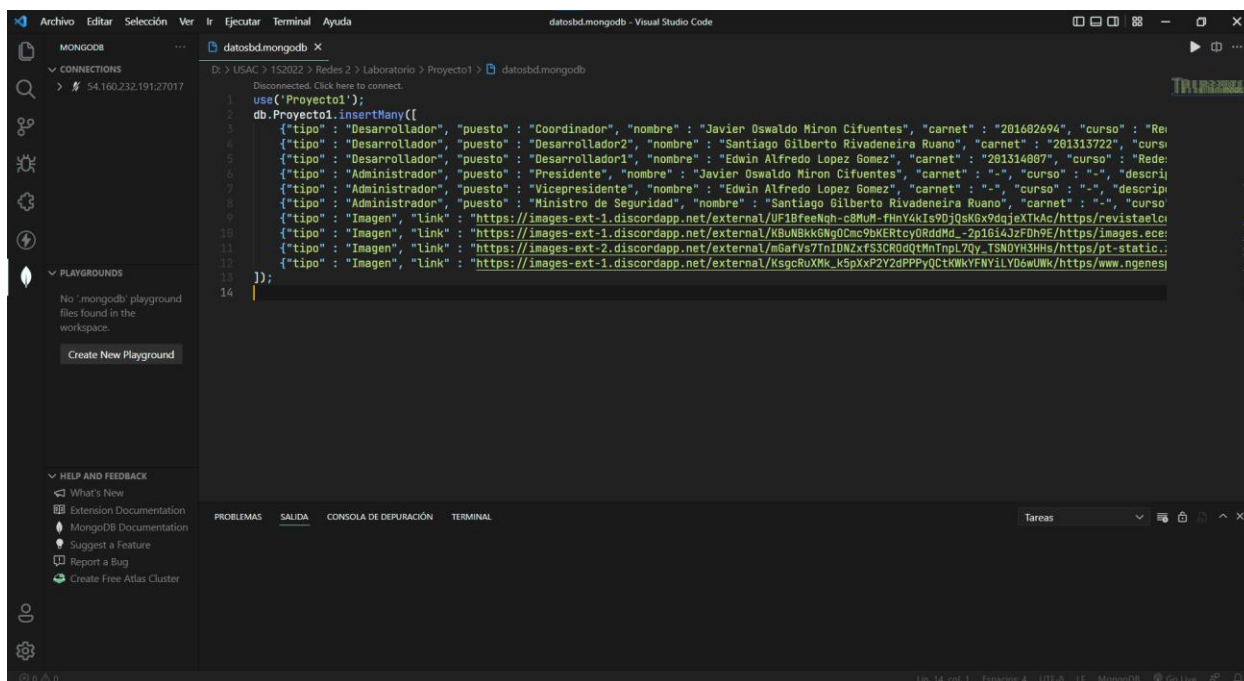
MongoDB es un programa de base de datos orientado a documentos multiplataforma disponible en la fuente. Clasificado como un programa de base de datos NoSQL, MongoDB utiliza documentos similares a JSON con esquemas opcionales. MongoDB es desarrollado por MongoDB Inc. y tiene licencia bajo la Licencia pública del lado del servidor (SSPL).

La base de datos fue implementada mediante Docker sobre una EC2 utilizando el siguiente comando y el puerto expuesto por defecto 27017

```
docker run -d -p 27017:27017 --name mongo mongo:latest
```

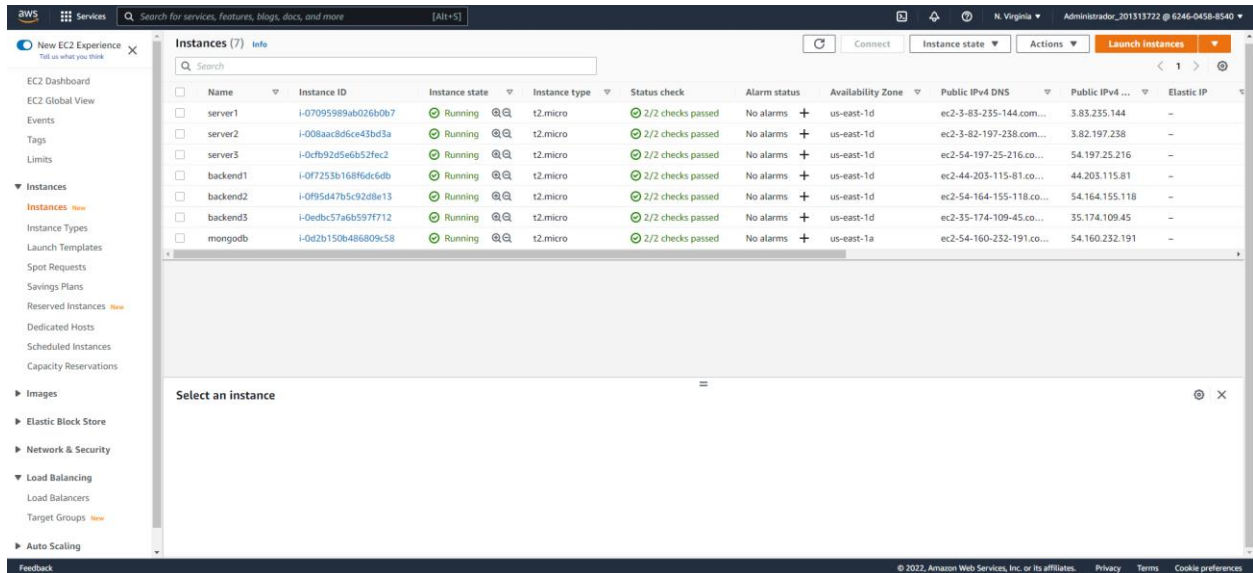
Se creo la base de datos Proyecto 1, así como la colección denominada Proyecto 1 en la cual se almacenaron todos los datos necesarios para desplegar la información.

## Carga de datos



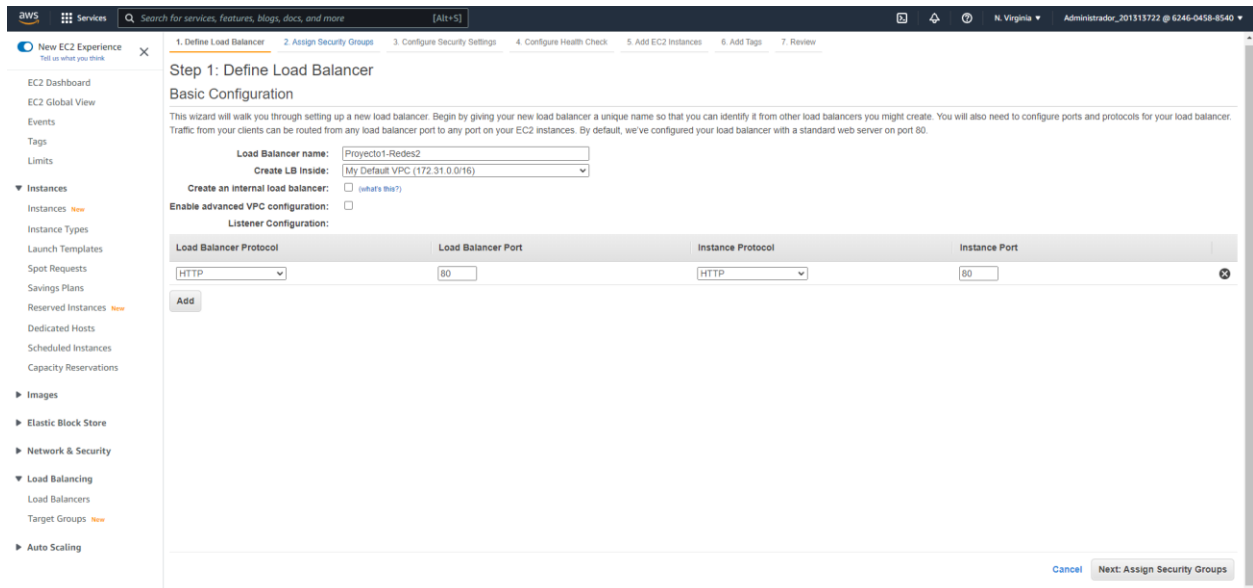
# SERVIDOR PAGINA WEB

## 1. Se crea



# BALANCEADOR DE CARGA

Distribuye el tráfico de red para mejorar la escalabilidad de las aplicaciones



RWS

Services

Search for services, features, blogs, docs, and more

[Alt+S]

N. VirginiaAdministrator\_201313722 @ 6246-0458-8540

New EC2 Experience  
Tell us what you think

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

Instances

Instances New

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances New

Dedicated Hosts

Scheduled Instances

Capacity Reservations

Images

Elastic Block Store

Network & Security

Load Balancing

Load Balancers

Target Groups New

Auto Scaling

1. Define Load Balancer

2. Assign Security Groups

3. Configure Security Settings

4. Configure Health Check

5. Add EC2 Instances

6. Add Tags

7. Review

## Step 2: Assign Security Groups

You have selected the option of having your Elastic Load Balancer inside of a VPC, which allows you to assign security groups to your load balancer. Please select the security groups to assign to this load balancer. This can be changed at any time.

**Assign a security group:** ☐ Create a new security group  
☒ Select an existing security group

Security Group ID	Name	Description	Actions
<input type="checkbox"/> sg-0d317e1df9c865a8b	default	default VPC security group	<a href="#">Copy to new</a>
<input type="checkbox"/> sg-0a5212a336d31637	launch-wizard-1	launch-wizard-1 created 2022-02-10T20:50:52.515-06:00	<a href="#">Copy to new</a>
<input type="checkbox"/> sg-0c0f095a2d691a96c	launch-wizard-2	launch-wizard-2 created 2022-04-01T17:56:35.285-06:00	<a href="#">Copy to new</a>
<input type="checkbox"/> sg-0b960a59eaa2c75b5	launch-wizard-3	launch-wizard-3 created 2022-04-01T18:06:48.031-06:00	<a href="#">Copy to new</a>
<input checked="" type="checkbox"/> sg-0c092d7bc4952e5d3	launch-wizard-4	launch-wizard-4 created 2022-04-01T19:03:44.920-06:00	<a href="#">Copy to new</a>
<input type="checkbox"/> sg-0ebd3433305167cad	launch-wizard-5	launch-wizard-5 created 2022-04-06T17:34:19.385-06:00	<a href="#">Copy to new</a>

Filter

VPC security groups

Cancel

Previous

Next: Configure Security Settings

**Step 5: Add EC2 Instances**

The table below lists all your running EC2 instances. Check the boxes in the Select column to add those instances to this load balancer.

VPC vpc-089d1688c5f0510c4 (172.31.0.0/16)

Select	Instance	Name	State	Security groups	Zone	Subnet ID	Subnet CIDR
<input checked="" type="checkbox"/>	i-07095969ab02960b7	server1	running	launch-wizard-4	us-east-1d	subnet-04a0a04e...	172.31.80.0/20
<input checked="" type="checkbox"/>	i-00baacdbfce43bd3a	server2	running	launch-wizard-4	us-east-1d	subnet-04a0a04e...	172.31.80.0/20
<input checked="" type="checkbox"/>	i-0c892dfe6b52fec2	server3	running	launch-wizard-4	us-east-1d	subnet-04a0a04e...	172.31.80.0/20
<input type="checkbox"/>	i-0f7253b16806dc6db	backend1	running	launch-wizard-5	us-east-1d	subnet-04a0a04e...	172.31.80.0/20
<input type="checkbox"/>	i-0f95447b5c928le13	backend2	running	launch-wizard-5	us-east-1d	subnet-04a0a04e...	172.31.80.0/20
<input type="checkbox"/>	i-0a0e7c0eef70713	backend3	stopped	launch-wizard-E	us-east-1d	subnet-04a0a04e...	172.31.80.0/20

**Availability Zone Distribution**  
3 instances in us-east-1d

☒ Enable Cross-Zone Load Balancing ⓘ

☒ Enable Connection Draining ⓘ 300 seconds

Cancel Previous Next: Add Tags



## ROUTE 53

Amazon Route 53 es un servicio web de sistema de nombres de dominio (DNS) escalable y de alta disponibilidad. Puede utilizar Route 53 para realizar tres funciones principales en cualquier combinación: registro de dominio, direccionamiento de DNS y comprobación de estado.

### 1. Se crea un Hosted Zone

The screenshot shows the 'Create hosted zone' page in the AWS Management Console. The page has a header with the AWS logo, a search bar, and user information. The main content area is titled 'Create hosted zone' and includes an 'Info' icon. Below the title is a section for 'Hosted zone configuration'. It contains a 'Domain name' field with the value 'redes2g181s2022.tk' and a 'Description - optional' field. The 'Type' section has two radio buttons: 'Public hosted zone' (selected) and 'Private hosted zone'. The 'Tags' section shows 'No tags associated with the resource.' and an 'Add tag' button. At the bottom are 'Cancel' and 'Create hosted zone' buttons.

**Hosted zone configuration**

A hosted zone is a container that holds information about how you want to route traffic for a domain, such as example.com, and its subdomains.

**Domain name** Info

This is the name of the domain that you want to route traffic for.

redes2g181s2022.tk

Valid characters: a-z, 0-9, !, " # \$ % & ' ( ) \* + , - . / : ; < > ? @ [ \ ] ^ \_ ` { } | ~ -

**Description - optional** Info

This value lets you distinguish hosted zones that have the same name.

The hosted zone is used for...

The description can have up to 256 characters. 0/256

**Type** Info

The type indicates whether you want to route traffic on the internet or in an Amazon VPC.

☒ **Public hosted zone**  
A public hosted zone determines how traffic is routed on the internet.

☐ **Private hosted zone**  
A private hosted zone determines how traffic is routed within an Amazon VPC.

**Tags** Info

Apply tags to hosted zones to help organize and identify them.

No tags associated with the resource.

[Add tag](#)

You can add up to 50 more tags.

[Cancel](#) [Create hosted zone](#)

### 2. Se crea un record tipo A el cual se asocia al balanceador de carga

The screenshot shows the 'Create record' page in the AWS Management Console. The page has a header with the AWS logo, a search bar, and user information. The main content area is titled 'Create record' and includes a 'Switch to wizard' link. Below the title is a section for 'Quick create record'. It contains a 'Record name' field with the value 'blog', a 'Record type' dropdown menu set to 'A - Routes traffic to an IPv4 address and some AWS resources', and a 'Route traffic to' section with an 'Alias' radio button selected. The 'Alias' section shows a dropdown menu for 'US East (N. Virginia) [us-east-1]' and a text input field with the value 'Q\_dualstack.Proyecto1-Redes2-609553413.us-east-1.elb.amazonaws.com'. The 'Routing policy' dropdown menu is set to 'Simple routing'. The 'Evaluate target health' section has a 'No' radio button selected. At the bottom are 'Cancel' and 'Create records' buttons.

**Quick create record** Info [Switch to wizard](#)

**Record 1** [Delete](#)

**Record name** Info

blog

Valid characters: a-z, 0-9, !, " # \$ % & ' ( ) \* + , - . / : ; < > ? @ [ \ ] ^ \_ ` { } | ~ -

**Record type** Info

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

**Route traffic to** Info ☒ **Alias**

Alias to Application and Classic Load Balancer

US East (N. Virginia) [us-east-1]

Q\_dualstack.Proyecto1-Redes2-609553413.us-east-1.elb.amazonaws.com

**Routing policy** Info

Simple routing

**Evaluate target health**

☐ No

[Add another record](#)

[Cancel](#) [Create records](#)

**View existing records**

The following table lists the existing records in redes2g181s2022.tk.

### 3. Se crea un cname el cual se asocia al record de tipo A creado anteriormente

The screenshot shows the AWS Route 53 console with the 'Create record' wizard for a CNAME record. The wizard is titled 'Quick create record' and includes a 'Switch to wizard' link. The 'Record 1' section shows the 'Record name' as 'www' and the 'Record type' as 'CNAME - Routes traffic to another domain name and to some AWS reso...'. The 'Value' field is set to 'redes2g181s2022.tk'. The 'TTL (seconds)' is set to '300' and the 'Routing policy' is 'Simple routing'. There are buttons for 'Delete', 'Add another record', 'Cancel', and 'Create records'.

Route 53 > Hosted zones > redes2g181s2022.tk > Create record

**Quick create record** [Info](#) [Switch to wizard](#)

**Record 1** [Delete](#)

Record name [Info](#)  .redes2g181s2022.tk Record type [Info](#)

Valid characters: a-z, 0-9, !, " # \$ % & ' ( ) \* + , - . / : ; < = > ? @ [ \ ] ^ \_ { } | . ~ -

Value [Info](#) ☐ Alias ☒ Alias

Enter multiple values on separate lines.

TTL (seconds) [Info](#)  Routing policy [Info](#)

1m 1h 1d Recommended values: 60 to 172800 (two days)

[Add another record](#)

[Cancel](#) [Create records](#)

**View existing records**  
The following table lists the existing records in redes2g181s2022.tk.

### 4. El record de tipo NS, así como el SOA se generan automáticamente al momento de crear la hosted zone.

The screenshot shows the AWS Route 53 console with the 'Hosted zone details' for 'redes2g181s2022.tk'. A blue banner at the top states: 'Record for redes2g181s2022.tk was successfully created. Route 53 propagates your changes to all of the Route 53 authoritative DNS servers within 60 seconds. Use "View status" button to check propagation status.' The 'Hosted zone details' section shows the zone name 'redes2g181s2022.tk' and buttons for 'Delete zone', 'Test record', 'Configure query logging', and 'Edit hosted zone'. Below this, the 'Records (4)' section shows a table of records.

Record for redes2g181s2022.tk was successfully created.  
Route 53 propagates your changes to all of the Route 53 authoritative DNS servers within 60 seconds. Use "View status" button to check propagation status.

Route 53 > Hosted zones > redes2g181s2022.tk

**redes2g181s2022.tk** [Info](#) [Delete zone](#) [Test record](#) [Configure query logging](#)

**Hosted zone details** [Edit hosted zone](#)

**Records (4)** [DNSSEC signing](#) [Hosted zone tags \(0\)](#)

**Records (4)** [Info](#) [Delete record](#) [Import zone file](#) [Create record](#)

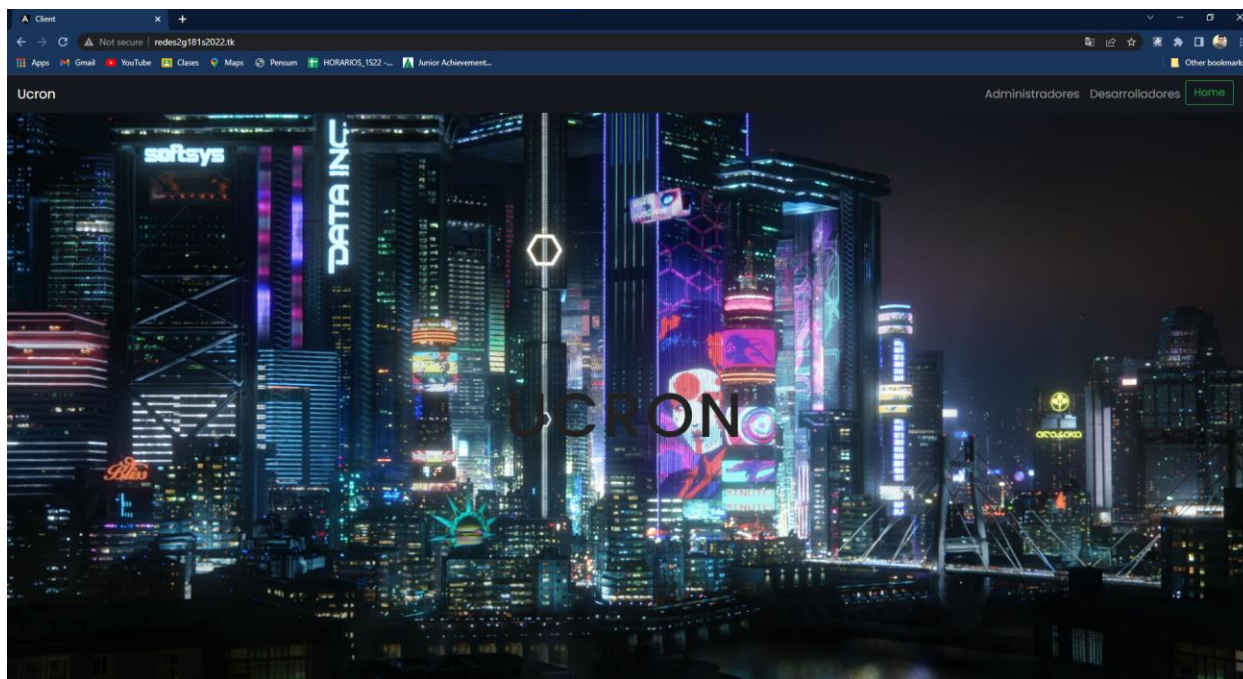
Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.

Filter records by property or value

	Record name	Type	Routin...	Differ...	Value/Route traffic to
<input type="checkbox"/>	redes2g181s2022.tk	A	Simple	-	dualstack.projcto1-redes2-609553413.us-east-1.elb.amazonaws.com.
<input type="checkbox"/>	redes2g181s2022.tk	NS	Simple	-	ns-544.awstdns-04.net. ns-1675.awstdns-17.co.uk. ns-1361.awstdns-42.org. ns-325.awstdns-40.com.
<input type="checkbox"/>	redes2g181s2022.tk	SOA	Simple	-	ns-544.awstdns-04.net. awstdns-hostmaster.amazon.com. 1 7200 900 1209600 B
<input type="checkbox"/>	www.redes2g181s2022.tk	CNAME	Simple	-	redes2g181s2022.tk



## 5. Validando que la hosted zone funcione correctamente



## FREENOM

Freenom es el primer proveedor de dominios exclusivamente gratuitos del mundo. Se solicito un dominio gratuito en Freenom.

**freenom**  
A Name for Everyone

Services ▾ Partners ▾ About Freenom ▾ Support ▾ Hello Santiago ▾ English ▾

### My Domains

View & manage all the domains you have registered with us from here...

Enter Domain to Find Filter

Domain	Registration Date	Expiry date	Status	Type
redes2g181s2022.tk	2022-03-31	2022-09-30	ACTIVE	Free

Results Per Page: 10 1 Records Found, Page 1 of 1

Manage Domain

## Managing redes2g181s2022.tk

[Information](#) [Upgrade](#) [Management Tools ▾](#) [Manage Freenom DNS](#)

Changes Saved Successfully!

## Nameservers

You can change where your domain points to here.  
Please be aware changes can take up to 24 hours to propagate.

☐ Use default nameservers (Freenom Nameservers)☒ Use custom nameservers (enter below)

Nameserver 1

NS-1361.AWSDNS-42.ORG

Nameserver 2

NS-1675.AWSDNS-17.CO.UK

Nameserver 3

NS-325.AWSDNS-40.COM

Nameserver 4

NS-544.AWSDNS-04.NET

Nameserver 5

[Change Nameservers](#)