Instructivo Desafío 6

Luego de crear la cuenta y realizar los prerrequisitos.

Tags

4) Owner: fcongedo

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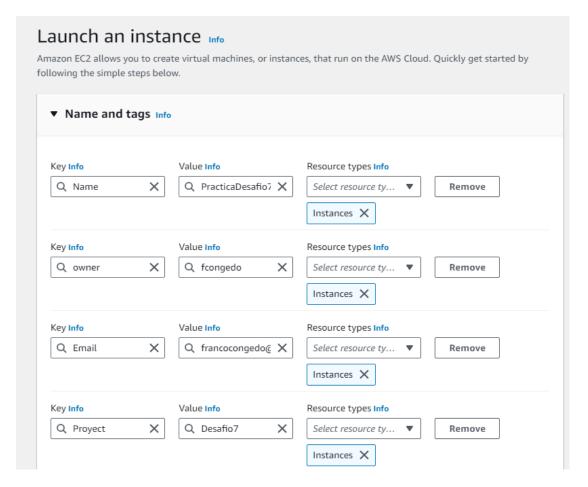
Proyect: Desafio7

Elastic Cloud Compute (EC2)

1) Crear una instancia EC2 dentro de los parámetros de free tier.

Ingresamos a la cuenta, Luego buscamos EC2 e ingresamos Siguiente paso buscamos en el menú izquierdo Instances e ingresamos Luego hacemos click en el botón naranja Launch instances

Name and tags

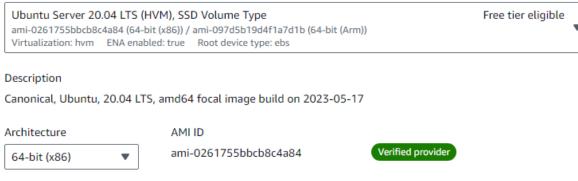


• Application and OS Images (Amazon Machine image)

Elegimos la iso (Ubuntu 20.0.4 LTS) (free tier) Arquitectura (64-bit x86)

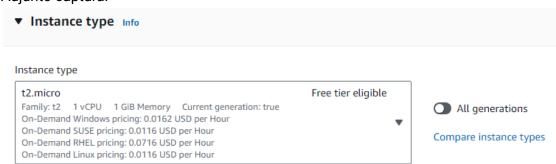
Adjunto captura de configuración:

▼ 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 Q Search our full catalog including 1000s of application and OS images **Quick Start** macOS Ubuntu Windows Red Hat SUSE Linux Debia Browse more AMIs Including AMIs from ubuntu[®] Microsoft (O. -Red Hat AWS, Marketplace and Mac SUSE the Community Amazon Machine Image (AMI) Ubuntu Server 20.04 LTS (HVM), SSD Volume Type Free tier eligible ami-0261755bbcb8c4a84 (64-bit (x86)) / ami-097d5b19d4f1a7d1b (64-bit (Arm))



Instance Type

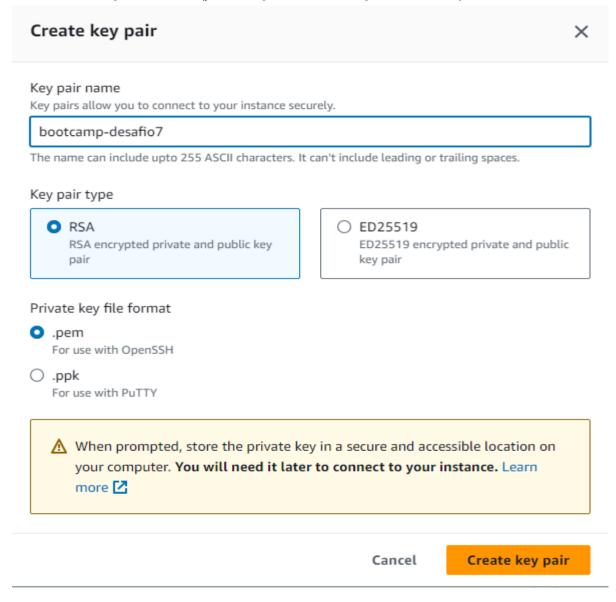
Seleccionamos Instancia t2.micro (free tier) Adjunto captura:



• Key pair (login)

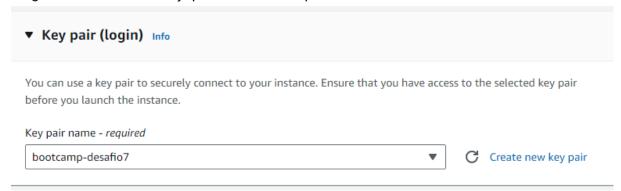
Primero hacemos click en la opción Create new key pair

Se nos abre el siguiente menú (y lo configuramos de la siguiente manera)



Luego hacemos click en Create key pair (se nos crea la key y se nos descarga)

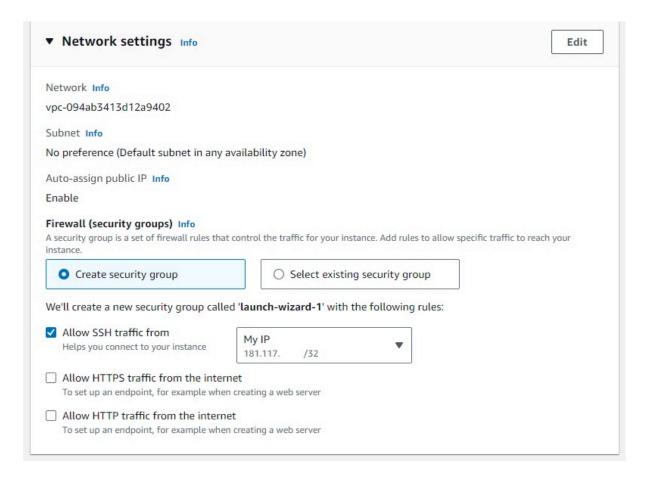
Luego seleccionamos la key que creamos en el paso anterior.



Network Settings

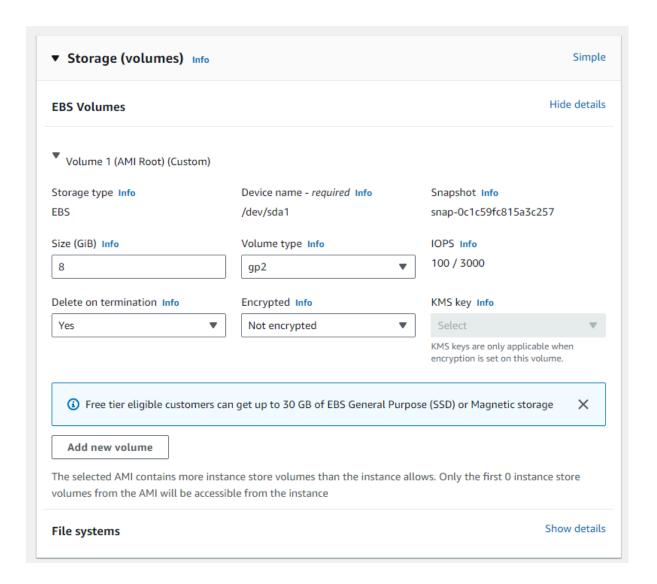
Vamos a activar el SSH y vamos a seleccionar el rango de mi ip pública.

Adjunto captura (borre parte de mi ip publica por seguridad):



Storage

Seleccionamos el mínimo (8gb) y gp2 free tier. Y activamos la opción para que elimine al terminar.



Por último hacemos click en Launch Instance

Adjunto captura de instancia corriendo



2) Configurar la conexión remota, la misma podrá ser a través de SSM, utilizando la llave de SSH y conectarnos desde nuestra VM con linux, etc. A elección de ustedes. Una vez configurado, verifiquen la conexión.

La configuración la realicé en la parte del punto 1) al crear y configurar la máquina virtual (genere la clave de SSH, habilité el SSH y filtré que solo funcione con mi dirección IP pública.

Lo único que debemos hacer cuando nos conectamos por primera vez es configurar los permisos de la clave.

Nos situamos donde tenemos la clave (en el directorio 'Downloads' en mi caso)
Ejecutamos un 'Is -I bootcamp-desafio7.pem' (para ver los permisos)
Luego ejecutamos un 'chmod 400 bootcamp-desafio7.pem'
Volvemos a ejecutar un 'Is -I' (para verificar los cambios)
Por último probamos la conexión

Adjunto captura de configuración y testeo de conexión por ssh:

```
desafio5@desafio5:~/Downloads$ ls
bootcamp-desafio7.pem
• desafio5@desafio5:~/Downloads$ ls -l bootcamp-desafio7.pem
-rw-rw-r-- 1 desafio5 desafio5 1674 ago 3 19:37 bootcamp-desafio7.pem desafio5@desafio5:~/Downloads$ chmod 400 bootcamp-desafio7.pem
odesafio5@desafio5:∼/Downloads$ ls -l bootcamp-desafio7.pem
* Documentation: https://help.ubuntu.com
   Management:
                  https://landscape.canonical.com
                  https://ubuntu.com/advantage
   System information as of Thu Aug 3 22:50:57 UTC 2023
   System load: 0.08
                                Processes:
                                                     98
   Usage of /: 20.9% of 7.57GB Users logged in:
   Memory usage: 18%
                                IPv4 address for eth0: 172.31.93.34
   Swap usage:
 Expanded Security Maintenance for Applications is not enabled.
 0 updates can be applied immediately.
```

Simple Storage Service (S3)

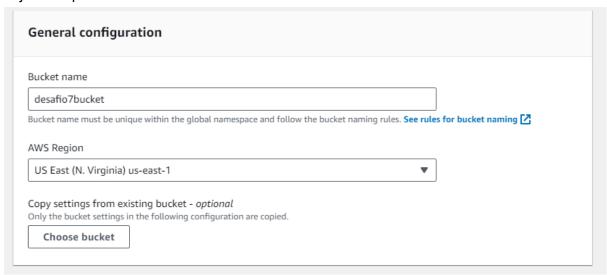
1) Crear bucket S3, tengan en cuenta que el nombre del bucket debe ser único

Ingresamos a la cuenta, Luego buscamos S3 e ingresamos Luego apretamos en Create Bucket

General Configuration

Configuramos el nombre (tiene que ser único) Y la región (misma que la instancia de s2)

Adjunto captura:



Luego dejamos por defecto todo (bloqueado el acceso público)

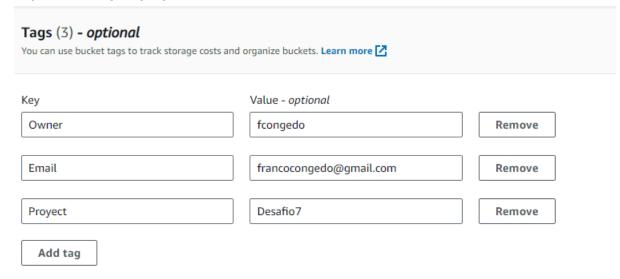
Object Ownership Info Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects. ACLs disabled (recommended) ACLs enabled Objects in this bucket can be owned by other AWS All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using accounts. Access to this bucket and its objects can be only policies specified using ACLs. Object Ownership Bucket owner enforced Block Public Access settings for this bucket Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to this bucket and its objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to this bucket or objects within, you can customize the individual settings below to suit your specific storage use cases. Learn more 🛂 Block all public access Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another. Block public access to buckets and objects granted through new access control lists (ACLs) S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs. Block public access to buckets and objects granted through any access control lists (ACLs) S3 will ignore all ACLs that grant public access to buckets and objects. Block public access to buckets and objects granted through new public bucket or access point policies S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources. Block public and cross-account access to buckets and objects through any public bucket or access point S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and

Bucket versioning

Habilitamos el versionado

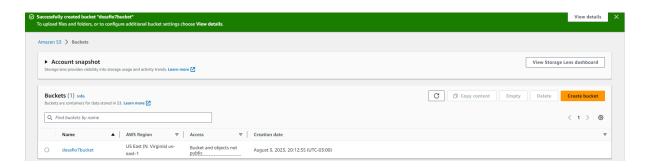
Bucket Versioning Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. Learn more Bucket Versioning Disable Enable

Captura de tags agregados:



Por último hacemos click en create bucket

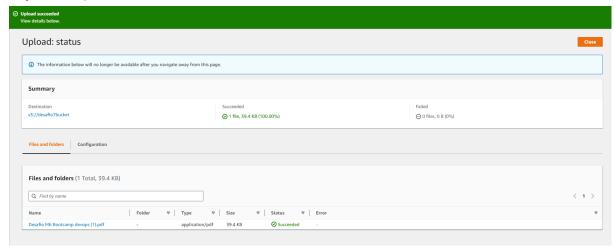
Adjunto captura del bucket creado



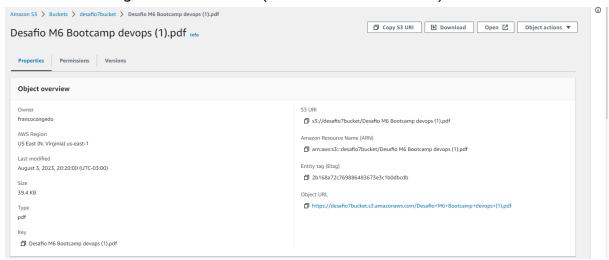
2) Subir este pdf como prueba al bucket s3 y verificación de que funciona de forma correcta

Por último subimos el pdf del desafío Dentro de él bucket hacemos click en <mark>Upload</mark> Luego buscamos el archivo, y lo subimos

Adjunto captura:



Podemos descargarlo directamente (clickeando en download)



Pero si queremos acceder usando el Objet URL (no vamos a poder)

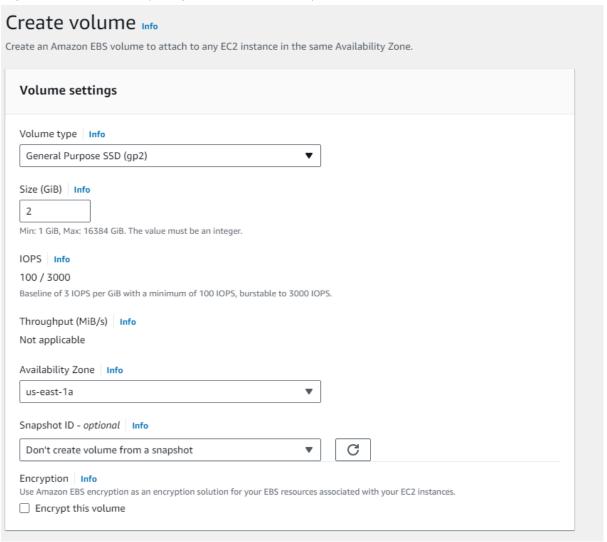
Adjunto captura:

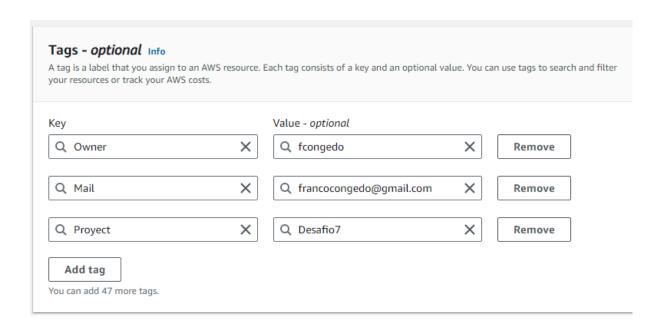
Elastic Block Store (EBS)

1) Crear un volumen de EBS y linkearlo a la instancia que creamos previamente (recuerden verificar que ambos estén en la misma región y AZ), usar valores por default y un tamaño de 2gb

Primero vamos a EC2, luego buscamos Volúmen y hacemos click en Create volume.

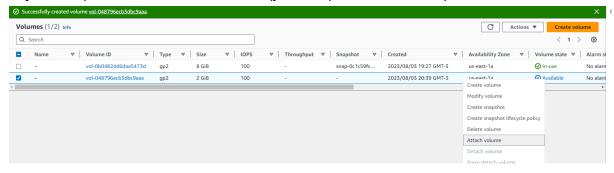
Adjunto configuración (2gb, y verificar misma az):





Y creamos el volumen.

Adjunto captura del volumen creado (y menú para attachearlo)



Vamos a attachearlo (buscamos la instancia de EC2 y clickeamos en Attach volume

Basic details				
/olume ID				
vol-048796ecb3dbc9aaa				
Availability Zone				
us-east-1a				
nstance Info				
i-0b2c1675fa781c9af		•	C	
Only instances in the same Availab	ility Zone as the selected	volume are displaye	d.	
Device name Info				
/dev/sdf				
Recommended device names for L	inux: /dev/sda1 for root v	olume. /dev/sd[f-p]	for data volumes.	
Nawar Linux karnale m	nay rename your device	es to /dev/xvdf t	hrough	
/dev/xvdp internally,				

Adjunto captura de comando 'Isblk' (volumen nuevo xvdf)

```
ubuntu@ip-172-31-93-34:~$ lsblk
NAME
        MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
loop0
          7:0
                 0 24.4M 1 loop /snap/amazon-ssm-agent/6312
loop1
          7:1
                 0 55.7M 1 loop /snap/core18/2745
loop2
                 0 63.5M 1 loop /snap/core20/1891
          7:2
                 0 91.9M 1 loop /snap/lxd/24061
loop3
          7:3
loop4
                 0 53.2M 1 loop /snap/snapd/19122
          7:4
xvda
        202:0
                      8G
                          0 disk
                 0
 -xvda1 202:1
                 0 7.9G 0 part /
 -xvda14 202:14
                          0 part
                 0
                      4M
 -xvda15 202:15
                          0 part /boot/efi
                 0 106M
xvdf
                          0 disk
        202:80
                 0
                      2G
```

2) Una vez que verificamos que el volumen se agregó de forma correcta a nuestro sistema, formatear el EBS como ext4, agregarlo al FSTAB y que el FS se monte en el directorio /desafíos. Montar el FS y verificar que se puede escribir en el mismo.

Primero formateamos como ext4 Ejecutamos 'sudo mkfs.ext4 /dev/xvdf'

Luego hacemos un 'Isblk -f' (para comprobar que está formateado como ext4)

Adjunto captura:

```
vfat UEFI A80E-52FF 98.3M 6% <u>/boot</u>

<u>/efi</u>

xvdf ext4 147659cf-6fdc-444a-81a8-3907bf91ca2d
```

Creamos el directorio /desafíos Ejecutamos 'sudo mkdir /desafios'

Adjunto captura:

```
ubuntu@ip-172-31-93-34:~$ sudo mkdir /desafios
```

Vamos a montarlo en el fstab Ejecutamos 'sudo nano /etc/fstab'

Adjunto configuración del fstab:

```
GNU nano 4.8 /etc/fstab

LABEL=cloudimg-rootfs / ext4 defaults,discard 0 1

LABEL=UEFI /boot/efi vfat umask=0077 0 1

UUID=147659cf-6fdc-444a-81a8-3907bf91ca2d /desafios ext4 defaults 0 0
```

Luego ejecutamos un 'sudo mount -a' (para forzar el montaje) Adjunto captura:

```
ubuntu@ip-172-31-93-34:~$ sudo mount -a
ubuntu@ip-172-31-93-34:~$ lsblk
        MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
NAME
loop0
                 0 24.4M 1 loop /snap/amazon-ssm-agent/6312
loop1
          7:1
                 0 55.7M 1 loop /snap/core18/2745
                0 63.5M 1 loop /snap/core20/1891
loop2
          7:2
                0 91.9M
                          1 loop /snap/lxd/24061
          7:3
loop3
                0 53.2M
                          1 loop /snap/snapd/19122
          7:4
loop4
                0
xvda
        202:0
                      8G
                          0 disk
 -xvda1
        202:1
                 0
                   7.9G
                           part /
  xvda14 202:14 0
                     4M
                          0
                            part
  xvda15 202:15
                 0
                   106M
                          0 part /boot/efi
xvdf
      202:80 0
                      2G 0 disk /desafios
```

Compruebo que se puede escribir

```
ubuntu@ip-172-31-93-34:/desafios$ sudo touch archivo_prueba.txt
ubuntu@ip-172-31-93-34:/desafios$ ls
archivo_prueba.txt lost+found
```

3) Una vez montado el FS, descargar el desafío que subimos al bucket de S3 y mover el archivo al directorio /desafíos (Para la descarga, se pueden utilizar diferentes formas como por ejemplo usar la AWS CLI, usar wget, etc en base a la forma que utilicen tendrán que cambiar los permisos del bucket).

Primero vamos a poner el bucket público (adjunto configuración)

Block Public Access settings for this account 1050

Use Amazon S3 Block public access settings to control the settings that allow public access to your data.

Block Public Access settings for this account

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies or all. In order to ensure that public access to all your S3 buckets and objects is blocked, turn on Block all public access. These settings apply account-wide for all current and future buckets and access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to your buckets or objects, you can customize the individual settings below to suit your specific storage use cases. Learn more

Edit

Block all public access

⚠ Off

Block public access to buckets and objects granted through *new* access control lists (ACLs)

Λ Off

Block public access to buckets and objects granted through any access control lists (ACLs)

⚠ Off

Block public access to buckets and objects granted through *new* public bucket or access point policies

Λ Off

Block public and cross-account access to buckets and objects through any public bucket or access point policies

▲ Off

Edit Object Ownership Info

Object Ownership

Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

 ACLs disabled (recommended)

> All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

ACLs enabled

Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.

Me recommend disabling ACLs, unless you need to control access for each object individually or to have the object writer own the data they upload. Using a bucket policy instead of ACLs to share data with users outside of your account simplifies permissions management and auditing.

Object Ownership

Bucket owner preferred

If new objects written to this bucket specify the bucket-ownerfull-control canned ACL, they are owned by the bucket owner. Otherwise, they are owned by the object writer.

Object writer

The object writer remains the object owner.

If you want to enforce object ownership for new objects only, your bucket policy must specify that the bucket-owner-full-control canned ACL is required for object uploads. Learn more [2]

Cancel

Save changes

Por último editamos los permisos (para hacer público el pdf)

dit access control list Info						
Access control list (ACL) Grant basic read/write permissions to AWS accounts. Learn more						
Grantee	Objects	Object ACL				
Object owner (your AWS	Read	✓ Read				
account) Canonical ID: Canonical ID:		✓ Write				
3b26df119e1d1bc6fa48c93d1 ac9afbbdc5d7c942fb						
Everyone (public access) Group: http://acs.amazonaws.co m/groups/global/AllUsers	✓ <u>A</u> Read	Read Write				
Authenticated users group (anyone with an AWS account) Group: http://acs.amazonaws.co m/groups/global/Authenticate dUsers	Read	Read Write				

Luego instalamos wget utilizando 'sudo apt update' 'sudo apt install wget'

Y luego como ya esta publico podemos descargar el archivo en el directorio /desafíos

Para eso ejecutamos 'sudo wget https://desafio7bucket.s3.amazonaws.com/Desafio+M6+Bootcamp+devops+(1).pd f -P /desafios/'

Adjunto capturas:

```
ubuntu@ip-172-31-93-34:~$ sudo wget https://desafio7bucket.s3.amazonaws.com/Desafio+M6+Bootcamp+devops+(1).pdf -P /desafios/
--2023-08-04 00:44:10-- https://desafio7bucket.s3.amazonaws.com/Desafio+M6+Bootcamp+devops+(1).pdf
Resolving desafio7bucket.s3.amazonaws.com (desafio7bucket.s3.amazonaws.com)... 52.217.126.41, 52.217.169.89, 54.231.195.225, ...
Connecting to desafio7bucket.s3.amazonaws.com (desafio7bucket.s3.amazonaws.com)|52.217.126.41|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 40386 (39K) [application/pdf]
Saving to: '/desafios/Desafio+M6+Bootcamp+devops+(1).pdf'

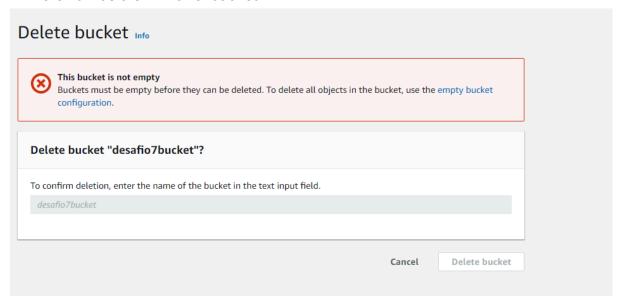
Desafio+M6+Bootcam 100%[===========]] 39.44K --.-KB/s in 0s

2023-08-04 00:44:10 (86.0 MB/s) - '/desafios/Desafio+M6+Bootcamp+devops+(1).pdf' saved [40386/40386]
```

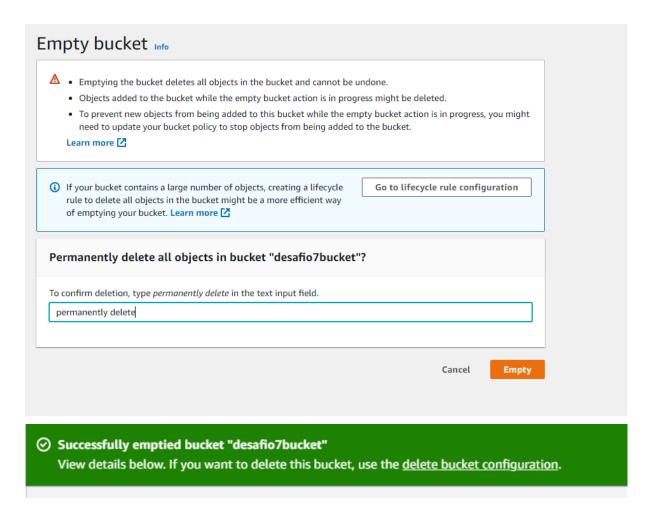
```
ubuntu@ip-172-31-93-34:~$ cd /desafios
ubuntu@ip-172-31-93-34:/desafios$ ls
'Desafio+M6+Bootcamp+devops+(1).pdf' archivo_prueba.txt lost+found
```

4) Adjunto capturas de eliminación de recursos.

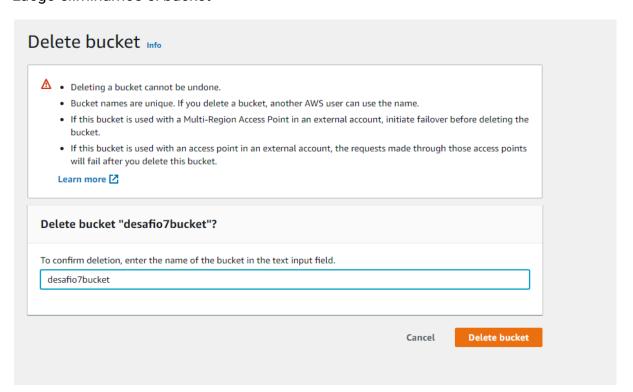
Primero vamos a eliminar el bucket



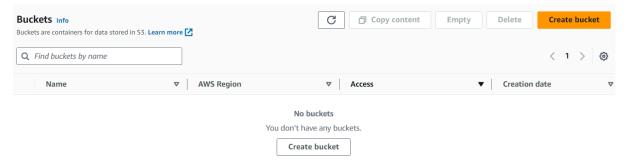
Nos dice que primero debemos eliminar el archivo (lo eliminamos)



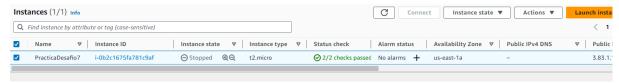
Luego eliminamos el bucket



Captura para demostrar que no hay buckets creados



Luego frenamos la instancia S2



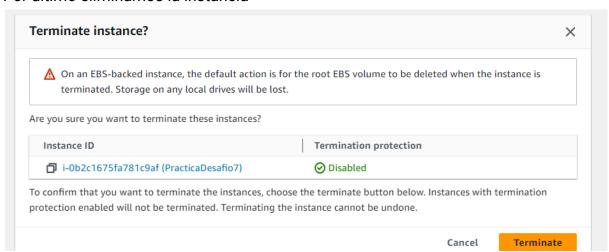
Vamos a volumes



(desatacheamos el volumen nuevo y lo eliminamos)



Por último eliminamos la instancia



Captura para asegurar que no hay instancias.

