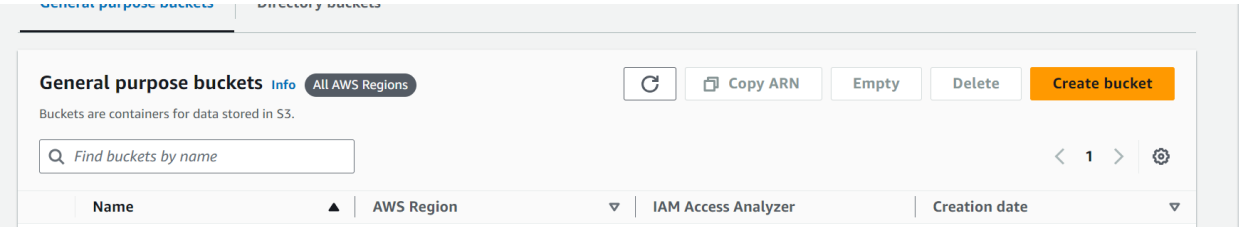
s3 bucket

s3 bucket is an global service

1.Create an S3 bucket from Amazon aws account



Select ACL →enabled option while creating an bucket.

▼ Making object Public

- Go inside a bucket
- Upload the object
- After uploading an object Navigate to the object →object Action→Make public using ACL

▼ Mounting an s3 bucket to an ec2 instance

- First of all Launch an Instance
- update the machine using yum update
- install the dependencies

```
[root@webserver ~]# yum update
Last metadata expiration check: 1 day, 8:20:28 ago on Fri Sep  6 06:44:14 2024.
Dependencies resolved.
Nothing to do.
Complete!
[root@webserver ~]# sudo yum install automake fuse fuse-devel gcc-c++ git libcurl-devel libxml2-devel make openssl-devel
Last metadata expiration check: 1 day, 8:20:45 ago on Fri Sep  6 06:44:14 2024.
Dependencies resolved.
================================================================================================================
 Package                    Architecture      Version                                Repository             Size
================================================================================================================
Installing:
 automake                   noarch            1.16.5-9.amzn2023.0.3                  amazonlinux           677 k
 fuse                       x86_64            2.9.9-13.amzn2023.0.2                  amazonlinux            80 k
 fuse-devel                 x86_64            2.9.9-13.amzn2023.0.2                  amazonlinux            34 k
 gcc-c++                    x86_64            11.4.1-2.amzn2023.0.2                  amazonlinux            12 M
 git                        x86_64            2.40.1-1.amzn2023.0.3                  amazonlinux            54 k
 libcurl-devel              x86_64            8.5.0-1.amzn2023.0.4                   amazonlinux           927 k
 libxml2-devel              x86_64            2.10.4-1.amzn2023.0.6                  amazonlinux           500 k
 make                       x86_64            1:4.3-5.amzn2023.0.2                   amazonlinux           534 k
 openssl-devel              x86_64            1:3.0.8-1.amzn2023.0.14                amazonlinux           3.0 M
Installing dependencies:
 annobin-docs               noarch            10.93-1.amzn2023.0.1                   amazonlinux            92 k
 annobin-plugin-gcc         x86_64            10.93-1.amzn2023.0.1                   amazonlinux           887 k
 autoconf                   noarch            2.69-36.amzn2023.0.3                   amazonlinux           666 k
```

- Now we have to clone the s3fs source code from git→**git clone https://github.com/s3fs-fuse/s3fs-fuse.git**

```
[root@webserver ~]# git clone https://github.com/s3fs-fuse/s3fs-fuse.git
Cloning into 's3fs-fuse'...
remote: Enumerating objects: 10467, done.
remote: Counting objects: 100% (2515/2515), done.
remote: Compressing objects: 100% (315/315), done.
remote: Total 10467 (delta 2345), reused 2267 (delta 2199), pack-reused 7952 (from 1)
Receiving objects: 100% (10467/10467), 6.03 MiB | 20.36 MiB/s, done.
Resolving deltas: 100% (7588/7588), done.
```

- Install the s3fs code by changing directory to cloned repo and use follwing command to compile and install

  cd s3fs-fuse

  ./autogen.sh

  ./configure --prefix=/usr --with-openssl

  make

  sudo make install

```
[root@webserver ~]# cd s3fs-fuse
./autogen.sh
./configure --prefix=/usr --with-openssl
make
sudo make install
--- Make commit hash file -------
 -> Git commit hash : 22869d9
--- Finished commit hash file ---
--- Start autotools -------------
configure.ac:30: installing './compile'
configure.ac:26: installing './config.guess'
```

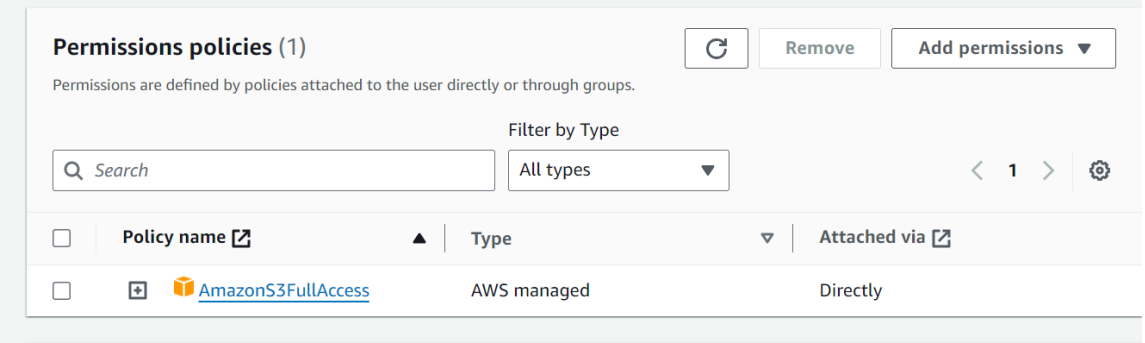
- Check if installation is successfull

```
[root@webserver s3fs-fuse]# which s3fs
/usr/bin/s3fs
```

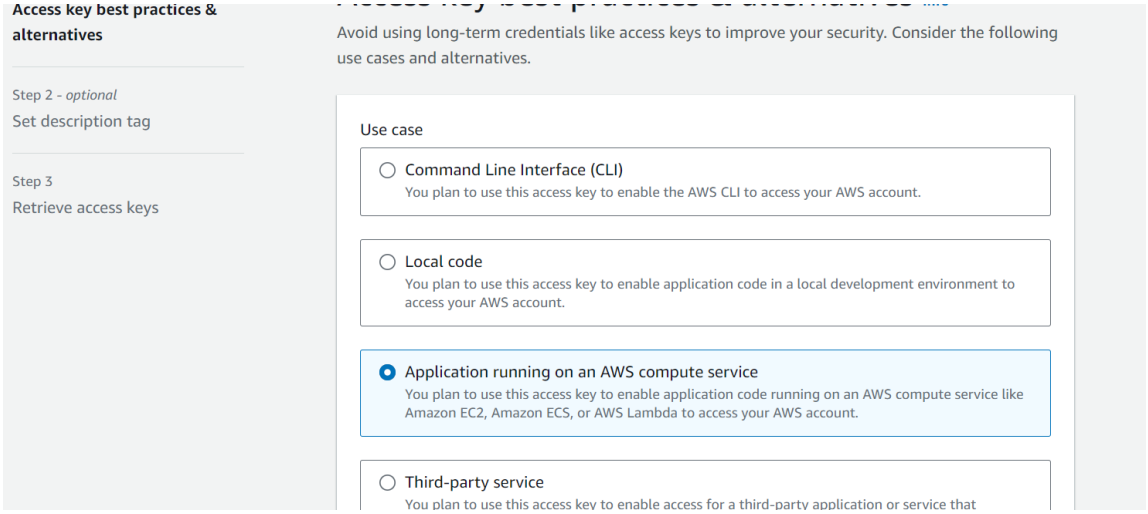
- Now we need AWS access key and secret key

  Go to AWS Menu → Your AWS Account Name → My Security Credentials. Here your IAM console will appear.

  You have to go to Users > Your Account name and under the permissions Tab, check whether you have sufficient access to the S3 bucket. If not, you can manually assign an existing “S3 Full-Access” policy or create a new policy with sufficient permissions.



Now go to the Security Credentials Tab and Create an Access Key. A new Access Key and Secret Key pair will be generated and download the csv



- Open csv file copy access and secret key → go to you instance and do the following

  Create a new file in /etc with the name passwd-s3fs and Paste the access key and secret key in the format **Your_accesskey:Your_secretkey**

  touch /etc/passwd-s3fs

  vim /etc/passwd-s3fs

  Change the permission

  chmod 640 /etc/passwd-s3fs

```
[root@webserver ~]# vim /etc/passwd-s3fs
[root@webserver ~]# sudo chmod 640 /etc/passwd-s3fs
[root@webserver ~]#
```

- Mount the S3 bucket

  to mount create an directory to be mounted upon

  mkdir /s3-bucket

s3fs **name1234567** -o use_cache=/tmp -o allow_other -o uid=1001 -o mp_umask=002 -o multireq_max=5 **/s3-bucket**

Note: you should write your bucket name and mounting directory where bold letters are mentioned

If no error occured use df -h to see mounted memory with 64 P

```
[root@webserver ~]# mkdir /s3-bucket
[root@webserver ~]# s3fs name1234567 -o use_cache=/tmp -o allow_other -o uid=1001 -o mp_umask=002 -o multireq_max=5 /mys
3bucket
s3fs: unable to access MOUNTPOINT /mys3bucket: No such file or directory
[root@webserver ~]# s3fs name1234567 -o use_cache=/tmp -o allow_other -o uid=1001 -o mp_umask=002 -o multireq_max=5 /s3-
bucket
[root@webserver ~]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        4.0M     0  4.0M   0% /dev
tmpfs           475M     0  475M   0% /dev/shm
tmpfs           190M  496K  190M   1% /run
/dev/xvda1      8.0G  1.9G  6.1G  24% /
tmpfs           475M     0  475M   0% /tmp
/dev/xvda128     10M  1.3M  8.7M  13% /boot/efi
tmpfs            95M     0   95M   0% /run/user/1000
s3fs             64P     0   64P   0% /s3-bucket
```

- now go to mounted dir

  cd /s3-bucket

  touch hello.txt

  ll

```
[root@webserver s3-bucket]# touch hello.txt
[root@webserver s3-bucket]# ll
total 99
-rw-r--r--. 1 1001 root      0 Sep  7 15:36  Hello
-rw-r-----. 1 1001 root 100563 Sep  7 14:51 'Media (3).jpg'
-rw-r--r--. 1 1001 root      0 Sep  7 15:36  hello.txt
[root@webserver s3-bucket]#
```

You can see the data from bucket

Name	Type	Last modified	Size	Storage class
Hello	-	September 7, 2024, 21:06:26 (UTC+05:30)	0 B	Standard
hello.txt	txt	September 7, 2024, 21:06:42 (UTC+05:30)	0 B	Standard