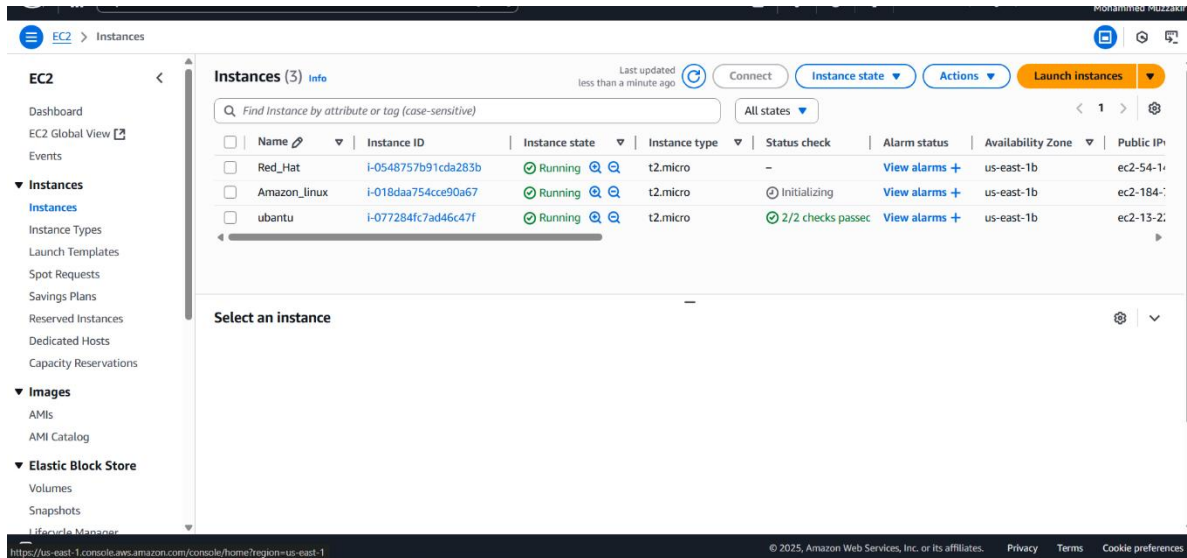


EFS AND EC2 ASSIGNMENT

STEP 1 : created 3 different instance with with AMI amzon linux,ubantu and Red Hat



STEP 2: Connected Ubuntu instances

```
System load: 0.08      Processes:    104
Usage of /: 25.4% of 6.71GB   Users logged in: 0
Memory usage: 21%      IPv4 address for enx0: 172.31.82.87
Swap usage: 0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

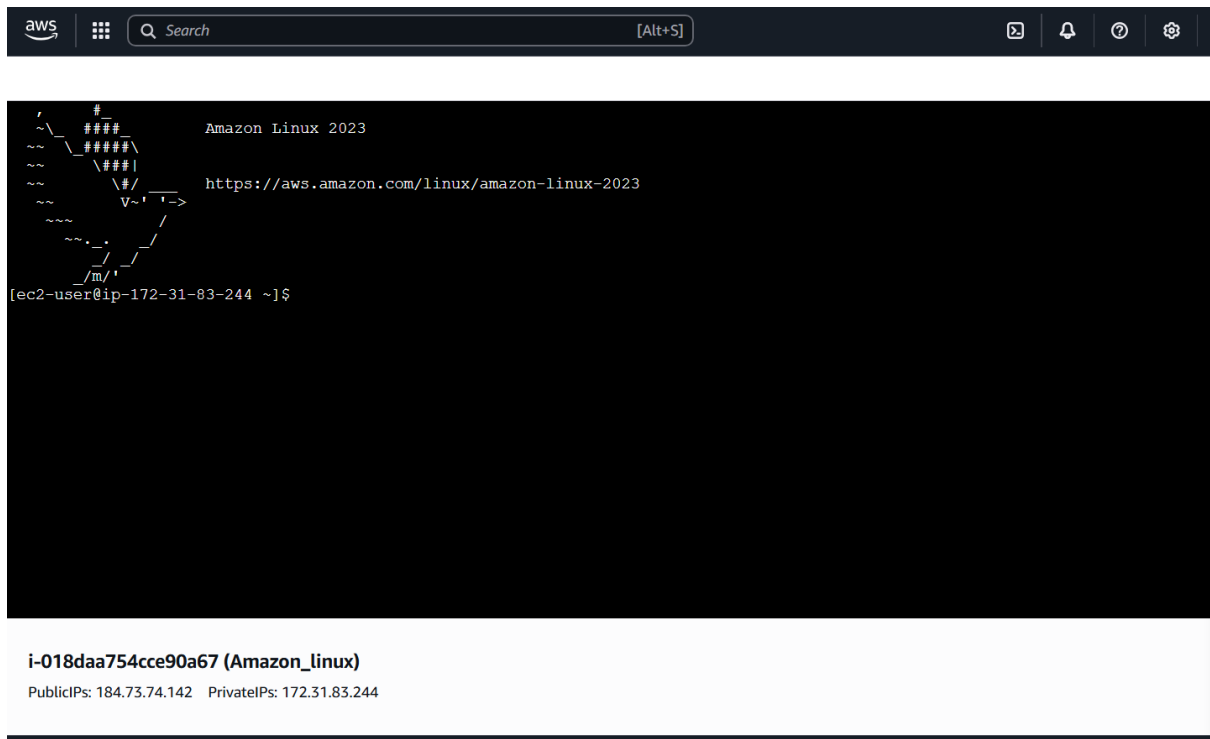
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-82-87:~$
```

i-077284fc7ad46c47f (ubuntu)

PublicIPs: 13.221.184.163 PrivateIPs: 172.31.82.87

STEP 3: Connected Amazon Linux instance



STEP 4: Connected created Red Hat instance with key pair in command prompt

```
C:\Users\Asus>cd download
The system cannot find the path specified.

C:\Users\Asus>cd download
The system cannot find the path specified.

C:\Users\Asus>cd downloads

C:\Users\Asus\Downloads>ssh -i "mahi_key.pem" ec2-user@ec2-54-146-152-20.compute-1.amazonaws.com
Warning: Identity file ssh not accessible: No such file or directory.
The authenticity of host 'ec2-54-146-152-20.compute-1.amazonaws.com (64:ff9b::3692:9814)' can't be established.
ED25519 key fingerprint is SHA256:ZokU3U9xvGUCz3HFXpJic9vviInMTQ+tT5z4BL/a80k.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-54-146-152-20.compute-1.amazonaws.com' (ED25519) to the list of known hosts.
Register this system with Red Hat Insights: rhc connect

Example:
# rhc connect --activation-key <key> --organization <org>

The rhc client and Red Hat Insights will enable analytics and additional
management capabilities on your system.
View your connected systems at https://console.redhat.com/insights

You can learn more about how to register your system
using rhc at https://red.ht/registration
[ec2-user@ip-172-31-83-99 ~]$
```

STEP 5: For each instance created allow all traffic from inbound rules as to connect EFS using EC2 NFS port must be enabled as all traffic allows every port and source from anywhere

EC2 > Security Groups > sg-0ccd793a833b098cd - default > Edit inbound rules

Edit inbound rules [Info](#)

Inbound rules control the incoming traffic that's allowed to reach the instance.

Security group rule ID	Type Info	Protocol Info	Port range Info	Source Info	Description - optional Info
sgr-0e9b24f64b6de2c73	All traffic	All	All	Anywh... <input type="text" value="0.0.0.0"/>	

[Add rule](#)

Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

[Cancel](#) [Preview changes](#) [Save rules](#)

STEP 6 : Create an EFS just by clicking on creat file system in EFS

aws Search [Alt+S] United States (N. Virginia) Account ID: 9826-54

Elastic File System

File systems
Access points

AWS Backup
AWS DataSync
AWS Transfer

Documentation

Amazon EFS > File systems

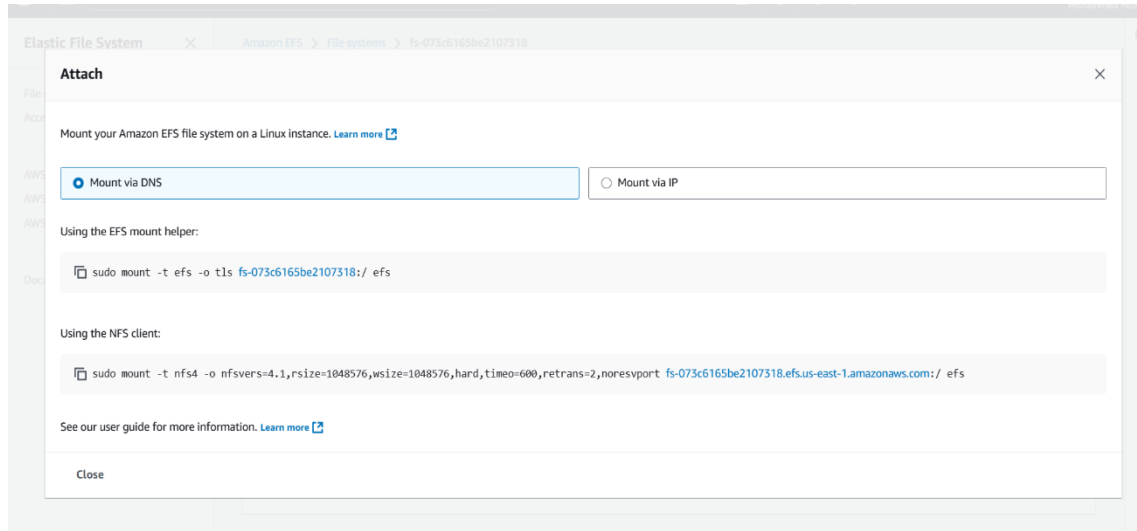
File systems (1) [View details](#) [Delete](#) [Create file system](#)

Filter by property values

Name	File system ID	Encrypte d	Total size	Size in Standard	Size in IA	Size in Archive	Provisioned Throughput (MiB/s)
efs_assign	fs-073c6165be2107318	Encrypte d	6.00 KIB	6.00 KIB	0 Bytes	0 Bytes	-

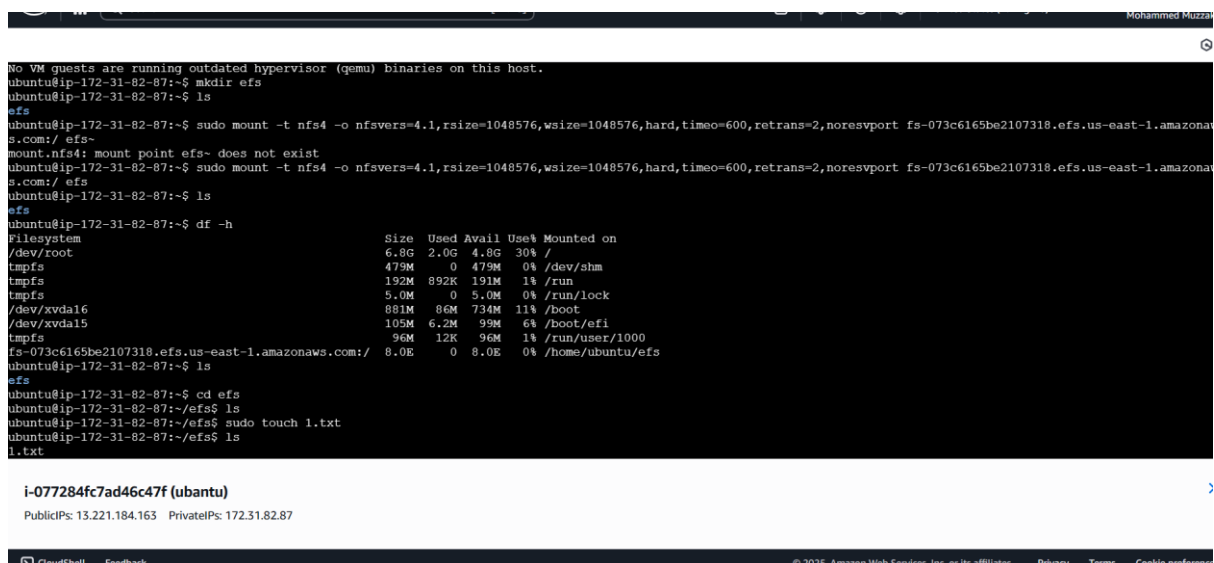
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STEP 7: Click on attach option in EFS to copy mount code that is required to mount the file in two different instance



STEP 8: After updating and installing required packages (i.e nfs-common & utils in different machine) create file EFS and just paste the mount code in it and next create file

Eg : As shown below 1.txt and 2.txt



Q

```
ubuntu@ip-172-31-82-87:~$ sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsize=1048576,hard,timeo=600,retrans=2,noresvport fs-073c6165be2107318.efs.us-east-1.amazonaws.com:/ efs~
mount.nfs4: mount point efs~ does not exist
ubuntu@ip-172-31-82-87:~$ sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsize=1048576,hard,timeo=600,retrans=2,noresvport fs-073c6165be2107318.efs.us-east-1.amazonaws.com:/ efs
ubuntu@ip-172-31-82-87:~$ ls
efs
ubuntu@ip-172-31-82-87:~$ df -h
Filesystem                Size      Used Avail Use% Mounted on
/dev/root                  6.8G      2.0G  4.8G  30% /
tmpfs                      479M          0  479M   0% /dev/shm
tmpfs                      192M    892K   191M   1% /run
tmpfs                      5.0M          0   5.0M   0% /run/lock
/dev/xvda16                881M      86M   734M  11% /boot
/dev/xvda15               105M     6.2M    99M   6% /boot/efi
tmpfs                      96M     12K    96M   1% /run/user/1000
fs-073c6165be2107318.efs.us-east-1.amazonaws.com:/  8.0E          0   8.0E   0% /home/ubuntu/efs
ubuntu@ip-172-31-82-87:~$ ls
efs
ubuntu@ip-172-31-82-87:~$ cd efs
ubuntu@ip-172-31-82-87:~/efs$ ls
ubuntu@ip-172-31-82-87:~/efs$ sudo touch 1.txt
ubuntu@ip-172-31-82-87:~/efs$ ls
1.txt
ubuntu@ip-172-31-82-87:~/efs$ sudo touch 2.txt
ubuntu@ip-172-31-82-87:~/efs$ ls
1.txt  2.txt
ubuntu@ip-172-31-82-87:~/efs$
```

i-077284fc7ad46c47f (ubuntu)

PublicIPs: 13.221.184.163 PrivateIPs: 172.31.82.87

X

STEP 9 : Similarly after updating and installing package create file and paste the mount code just list the file in EFS it will show the files created from Ubuntu machine

aws

Q Search [Alt+S]

United States (N. Virginia) Account ID: 9826-5837-7055 Mohammed Muzzakir

Q

```
Amazon Linux 2023 Kernel Livepatch repository
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-83-244 ~]$ sudo yum install nfs-utils
Last metadata expiration check: 0:00:21 ago on Tue Aug 12 13:40:03 2025.
Package nfs-utils-1:2.5.4-2.rc3.amzn2023.0.3.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-83-244 ~]$ ls
[ec2-user@ip-172-31-83-244 ~]$ mkdir efs
[ec2-user@ip-172-31-83-244 ~]$ ls
efs
[ec2-user@ip-172-31-83-244 ~]$ sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsize=1048576,hard,timeo=600,retrans=2,noresvport fs-073c6165be2107318.efs.us-east-1.amazonaws.com:/ efs~
mount.nfs4: mount point efs~ does not exist
[ec2-user@ip-172-31-83-244 ~]$ sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsize=1048576,hard,timeo=600,retrans=2,noresvport fs-073c6165be2107318.efs.us-east-1.amazonaws.com:/ efs~
mount.nfs4: mount point efs~ does not exist
[ec2-user@ip-172-31-83-244 ~]$ cd efs
[ec2-user@ip-172-31-83-244 efs]$ ls
1.txt
[ec2-user@ip-172-31-83-244 efs]$ ls
1.txt  2.txt
[ec2-user@ip-172-31-83-244 efs]$
```

i-018daa754cce90a67 (Amazon_linux)

PublicIPs: 184.73.74.142 PrivateIPs: 172.31.83.244

X

STEP 10: Similarly for Red Hat machine as well as shown below

```
Example:
# rhc connect --activation-key <key> --organization <org>

The rhc client and Red Hat Insights will enable analytics and additional
management capabilities on your system.
View your connected systems at https://console.redhat.com/insights

You can learn more about how to register your system
using rhc at https://red.ht/registration
Last login: Tue Aug 12 13:17:21 2025 from 152.57.7.116
[ec2-user@ip-172-31-83-99 ~]$ sudo yum install nfs-utils
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use "rhc" or "subscription-manager" to register.

Red Hat Enterprise Linux 10 for x86_64 - AppStream from RHUI (RPMs)          17 MB/s | 3.0 MB  00:00
Red Hat Enterprise Linux 10 for x86_64 - BaseOS from RHUI (RPMs)         53 MB/s | 17 MB  00:00
Red Hat Enterprise Linux 10 Client Configuration                       23 kB/s | 1.9 kB  00:00
Dependencies resolved.
=====
Package                        Architecture      Version           Repository         Size
=====
Installing:
nfs-utils                      x86_64            1:2.8.2-3.el10    rhel-10-baseos-rhui-rpms 487 k
Installing dependencies:
gssproxy                       x86_64            0.9.2-10.el10     rhel-10-baseos-rhui-rpms 118 k
libev                           x86_64            4.33-14.el10      rhel-10-baseos-rhui-rpms 56 k
libnfsidmap                    x86_64            1:2.8.2-3.el10    rhel-10-baseos-rhui-rpms 67 k
libtirpc                       x86_64            1.3.5-1.el10      rhel-10-baseos-rhui-rpms 98 k
libverto-libev                 x86_64            0.3.2-10.el10     rhel-10-baseos-rhui-rpms 15 k
quota                          x86_64            1:4.09-9.el10     rhel-10-baseos-rhui-rpms 201 k
quota-nls                      noarch            1:4.09-9.el10     rhel-10-baseos-rhui-rpms 79 k
rpcbind                        x86_64            1.2.7-3.el10      rhel-10-baseos-rhui-rpms 63 k
sssd-nfs-idmap                 x86_64            2.10.2-3.el10_0.2 rhel-10-baseos-rhui-rpms 37 k
=====
Transaction Summary
=====
Install 10 Packages

Total download size: 1.2 M
```

```
ec2-user@ip-172-31-83-99 ~$ sudo yum install nfs-utils
Running scriptlet: rpcbind-1.2.7-3.el10.x86_64 3/10
Created symlink '/etc/systemd/system/multi-user.target.wants/rpcbind.service' → '/usr/lib/systemd/system/rpcbind.service'.
Created symlink '/etc/systemd/system/sockets.target.wants/rpcbind.socket' → '/usr/lib/systemd/system/rpcbind.socket'.

Installing      : quota-nls-1:4.09-9.el10.noarch 4/10
Installing      : quota-1:4.09-9.el10.x86_64 5/10
Installing      : libev-4.33-14.el10.x86_64 6/10
Installing      : libverto-libev-0.3.2-10.el10.x86_64 7/10
Running scriptlet: gssproxy-0.9.2-10.el10.x86_64 8/10
Installing      : gssproxy-0.9.2-10.el10.x86_64 8/10
Running scriptlet: gssproxy-0.9.2-10.el10.x86_64 8/10
Running scriptlet: nfs-utils-1:2.8.2-3.el10.x86_64 9/10
Installing      : nfs-utils-1:2.8.2-3.el10.x86_64 9/10
Running scriptlet: nfs-utils-1:2.8.2-3.el10.x86_64 9/10
Created symlink '/etc/systemd/system/multi-user.target.wants/nfs-client.target' → '/usr/lib/systemd/system/nfs-client.target'.
Created symlink '/etc/systemd/system/remote-fs.target.wants/nfs-client.target' → '/usr/lib/systemd/system/nfs-client.target'.

Warning: The unit file, source configuration file or drop-ins of gssproxy.service changed on disk. Run 'systemctl daemon-reload' to reload units.
Warning: The unit file, source configuration file or drop-ins of gssproxy.service changed on disk. Run 'systemctl daemon-reload' to reload units.

Installing      : sssd-nfs-idmap-2.10.2-3.el10_0.2.x86_64 10/10
Running scriptlet: sssd-nfs-idmap-2.10.2-3.el10_0.2.x86_64 10/10
Installed products updated.

Installed:
gssproxy-0.9.2-10.el10.x86_64      libev-4.33-14.el10.x86_64      libnfsidmap-1:2.8.2-3.el10.x86_64
libtirpc-1.3.5-1.el10.x86_64      libverto-libev-0.3.2-10.el10.x86_64  nfs-utils-1:2.8.2-3.el10.x86_64
quota-1:4.09-9.el10.x86_64        quota-nls-1:4.09-9.el10.noarch  rpcbind-1.2.7-3.el10.x86_64
sssd-nfs-idmap-2.10.2-3.el10_0.2.x86_64

Complete!
[ec2-user@ip-172-31-83-99 ~]$ mkdir efs
[ec2-user@ip-172-31-83-99 ~]$ ls
efs
[ec2-user@ip-172-31-83-99 ~]$ sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsz=1048576,hard,timeo=600,retrans=2,noresvport fs-073c6165be2107318.efs.us-east-1.amazonaws.com:/ efs
[ec2-user@ip-172-31-83-99 ~]$ cd efs
[ec2-user@ip-172-31-83-99 efs]$ ls
1.txt 2.txt
[ec2-user@ip-172-31-83-99 efs]$ |
```

