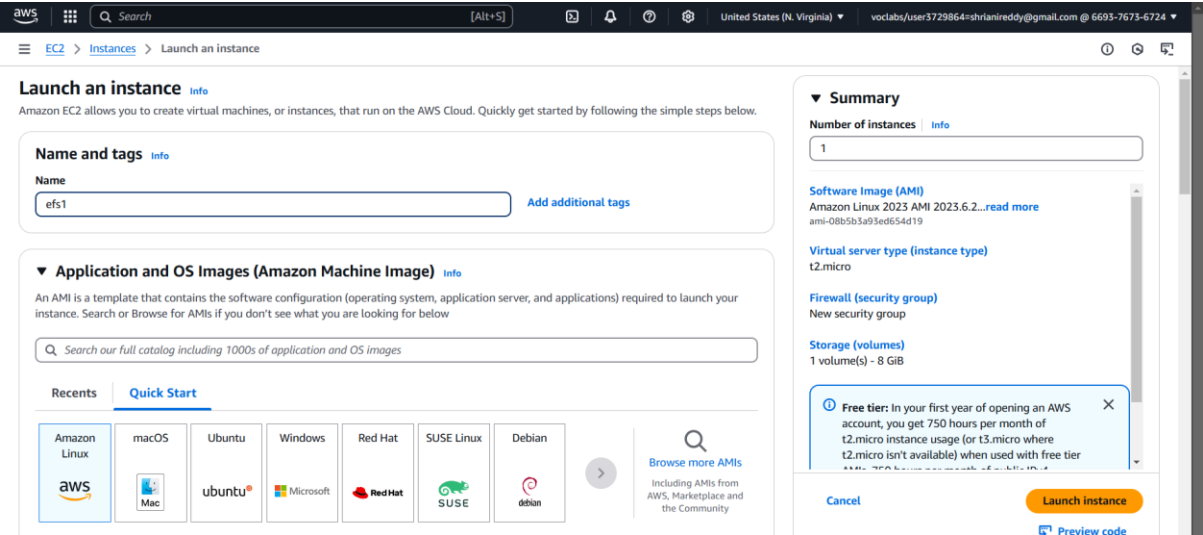


EFS

Amazon **Elastic File System (EFS)** is a **fully managed, scalable, and shared file storage** service for **Linux-based** EC2 instances. It allows multiple instances to access the same file system **simultaneously**, making it ideal for applications that require shared storage.

Navigate to the AWS console and create a ec2 instance, select LINUX OS



Let AMI and architecture be default

Amazon Machine Image (AMI)

Amazon Linux 2023 AMI

ami-08b5b3a93ed654d19 (64-bit (x86), uefi-preferred) / ami-0eae2a0fc13b15fce (64-bit (Arm), uefi)

Virtualization: hvm    ENA enabled: true    Root device type: ebs

Free tier eligible

Description

Amazon Linux 2023 is a modern, general purpose Linux-based OS that comes with 5 years of long term support. It is optimized for AWS and designed to provide a secure, stable and high-performance execution environment to develop and run your cloud applications.

Amazon Linux 2023 AMI 2023.6.20250303.0 x86\_64 HVM kernel-6.1

Architecture	Boot mode	AMI ID	Publish Date	Username
64-bit (x86)	uefi-preferred	ami-08b5b3a93ed654d19	2025-03-04	ec2-user

Verified provider

Select t2.micro instance type.

▼ Instance type [Info](#) | [Get advice](#)

Instance type

t2.micro

Free tier eligible

Family: t2 1 vCPU 1 GiB Memory Current generation: true  
On-Demand Windows base pricing: 0.0162 USD per Hour  
On-Demand Ubuntu Pro base pricing: 0.0134 USD per Hour  
On-Demand SUSE base pricing: 0.0116 USD per Hour On-Demand RHEL base pricing: 0.026 USD per Hour  
On-Demand Linux base pricing: 0.0116 USD per Hour

▼

[Additional costs apply for AMIs with pre-installed software](#)

☐ All generations

[Compare instance types](#)

▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - *required*

efs-putty

▼

[Create new key pair](#)

Create a ppk key-pair

Create key pair

×

Key pair name

Key pairs allow you to connect to your instance securely.

efs-putty

The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type

☒ RSA  
RSA encrypted private and public key pair

☐ ED25519  
ED25519 encrypted private and public key pair

Private key file format

☐ .pem  
For use with OpenSSH

☒ .ppk  
For use with PuTTY

⚠ When prompted, store the private key in a secure and accessible location on your computer. You will need it later to connect to your instance. [Learn more](#)

Cancel

Create key pair

Edit the Network settings and create a security group

▼ Network settings Info

VPC - required Info

vpc-001d4b527e6a58a9b172.31.0.0/16(default)↕

Subnet Info

No preference↕Create new subnet↗

Auto-assign public IP Info

Enable↕

Additional charges apply when outside of free tier allowance

Firewall (security groups) Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☒ Create security group☐ Select existing security group

Security group name - required

launch-wizard-5

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and \_-:/()#,@!+=&;[]!\$\*

Description - required Info

launch-wizard-5 created 2025-03-13T04:51:55.635Z

Inbound Security Group Rules

▼ Security group rule 1 (TCP, 22, 0.0.0.0/0)

Remove

Select NFS type and add CIDR

0.0.0.0/0 ✕

▼ Security group rule 4 (TCP, 2049, 0.0.0.0/0)Remove

Type Info

NFS↕

Protocol Info

TCP

Port range Info

2049

Source type Info

Custom↕

Source Info

🔍 Add CIDR, prefix list or security group

0.0.0.0/0 ✕

Description - optional Info

e.g. SSH for admin desktop

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

Add security group rule



## Select the AMI, Architecture and Instance type

EC2 > Instances > Launch an instance

**Amazon Machine Image (AMI)**

Amazon Linux 2023 AMI  
ami-08b5b3a93ed654d19 (64-bit (x86), uefi-preferred) / ami-08ae2a0fc13b15fce (64-bit (Arm), uefi)  
Virtualization: hvm ENA enabled: true Root device type: ebs Free tier eligible

**Description**

Amazon Linux 2023 is a modern, general purpose Linux-based OS that comes with 5 years of long term support. It is optimized for AWS and designed to provide a secure, stable and high-performance execution environment to develop and run your cloud applications.

Amazon Linux 2023 AMI 2023.6.20250303.0 x86\_64 HVM kernel-6.1

Architecture	Boot mode	AMI ID	Publish Date	Username
64-bit (x86)	uefi-preferred	ami-08b5b3a93ed654d19	2025-03-04	ec2-user

Verified provider

**▼ Instance type** Info | Get advice

Instance type: t2.micro Free tier eligible

Family: t2 1 vCPU 1 GiB Memory Current generation: true  
On-Demand Windows base pricing: 0.0162 USD per Hour  
On-Demand Ubuntu Pro base pricing: 0.0134 USD per Hour  
On-Demand SUSE base pricing: 0.0116 USD per Hour On-Demand RHEL base pricing: 0.026 USD per Hour  
On-Demand Linux base pricing: 0.0116 USD per Hour

All generations Compare instance types

**▼ Summary**

Number of instances Info  
1

**Software Image (AMI)**  
Amazon Linux 2023 AMI 2023.6.2...read more  
ami-08b5b3a93ed654d19

**Virtual server type (instance type)**  
t2.micro

**Firewall (security group)**  
New security group

**Storage (volumes)**  
1 volume(s) - 8 GiB

Free tier: In your first year of opening an AWS account, you get 750 hours per month of t2.micro instance usage (or t3.micro where t2.micro isn't available) when used with free tier

Cancel Launch instance Preview code

## Select the existing key-pair and select the security group that you created in the previous instance

EC2 > Instances > Launch an instance

Key pair name - required  
efs-putty Create new key pair

**▼ Network settings** Info Edit

**Network** Info  
vpc-001d4b527e6a58a9b

**Subnet** Info  
No preference (Default subnet in any availability zone)

**Auto-assign public IP** Info  
Enable  
Additional charges apply when outside of free tier allowance

**Firewall (security groups)** Info  
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.  
☐ Create security group ☒ Select existing security group

**Common security groups** Info  
Select security groups  
launch-wizard-5 sg-06308802cf8665ecc  
VPC: vpc-001d4b527e6a58a9b  
Compare security group rules

Security groups that you add or remove here will be added to or removed from all your network interfaces.

**▼ Summary**

Number of instances Info  
1

**Software Image (AMI)**  
Amazon Linux 2023 AMI 2023.6.2...read more  
ami-08b5b3a93ed654d19

**Virtual server type (instance type)**  
t2.micro

**Firewall (security group)**  
launch-wizard-5

**Storage (volumes)**  
1 volume(s) - 8 GiB

Free tier: In your first year of opening an AWS account, you get 750 hours per month of t2.micro instance usage (or t3.micro where t2.micro isn't available) when used with free tier

Cancel Launch instance Preview code

## Configure the storage system

Select security groups  
launch-wizard-5 sg-06308802cf8665ecc  
VPC: vpc-001a4b527e6a39a9b  
Security groups that you add or remove here will be added to or removed from all your network interfaces.

Compare security group rules

### Configure storage

1x 8 GiB gp3 Root volume, 3000 IOPS, Not encrypted

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

Add new volume

Click refresh to view backup information  
The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

0 x File systems

Advanced details

### Summary

Number of instances: 1

Software Image (AMI): Amazon Linux 2023 AMI 2023.6.2...  
ami-08b5b3a93ed554d19

Virtual server type (instance type): t2.micro

Firewall (security group): launch-wizard-5

Storage (volumes): 1 volume(s) - 8 GiB

Free tier: In your first year of opening an AWS account, you get 750 hours per month of t2.micro instance usage (or t3.micro where t2.micro isn't available) when used with free tier

Cancel Launch instance Preview code

## Launch the instance



## The 2 instances should be in 2 different zones of the same region

<input type="checkbox"/>	efs2	i-0a4bd425b47129e8a	Running	t2.micro	2/2 checks passed	View alarms	us-east-1c	ec2-3-89
<input type="checkbox"/>	efs1	i-0514c2b2a83992124	Running	t2.micro	2/2 checks passed	View alarms	us-east-1d	ec2-54-2

## Connect to efs1, and open putty, copy the host id and paste it

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ConnectToInstance:instanceId=i-0514c2b2a83992124

EC2 > Instances > i-0514c2b2a83992124 > Connect to instance

### Connect to instance

Connect to your instance i-0514c2b2a83992124 (efs1) using any of these options

EC2 Instance Connect Session Manager SSH client EC2 serial console

Instance ID: i-0514c2b2a83992124 (efs1)

- Open an SSH client.
- Locate your private key file. The key used to launch this instance is efs-putty.pem
- Run this command, if necessary, to ensure your key is not publicly viewable.  
chmod 400 "efs-putty.pem"
- Connect to your instance using its Public DNS:  
ec2-54-225-41-202.compute-1.amazonaws.com

Example:  
ssh -i "efs-putty.pem" ec2-user@ec2-54-225-41-202.compute-1.amazonaws.com

Note: In most cases, the guessed username is correct. However, read your AMI usage instructions.

PuTTY Configuration

Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address): ec2-user@ec2-54-225-41-202.compute-1.amazonaws.com Port: 22

Connection type: SSH

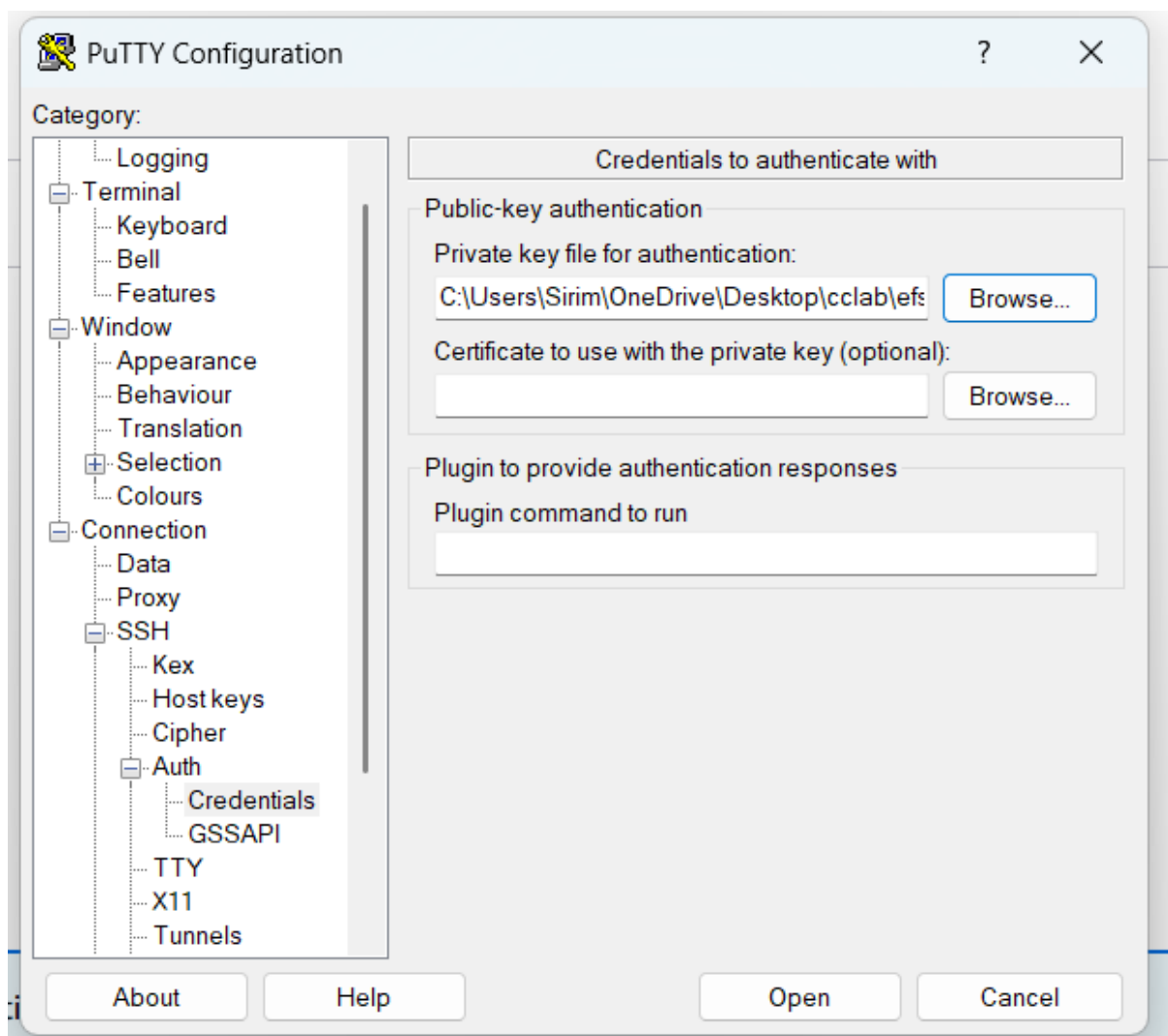
Load, save or delete a stored session

Default Settings

Close window on exit: Always Never Only on clean exit

Open Cancel

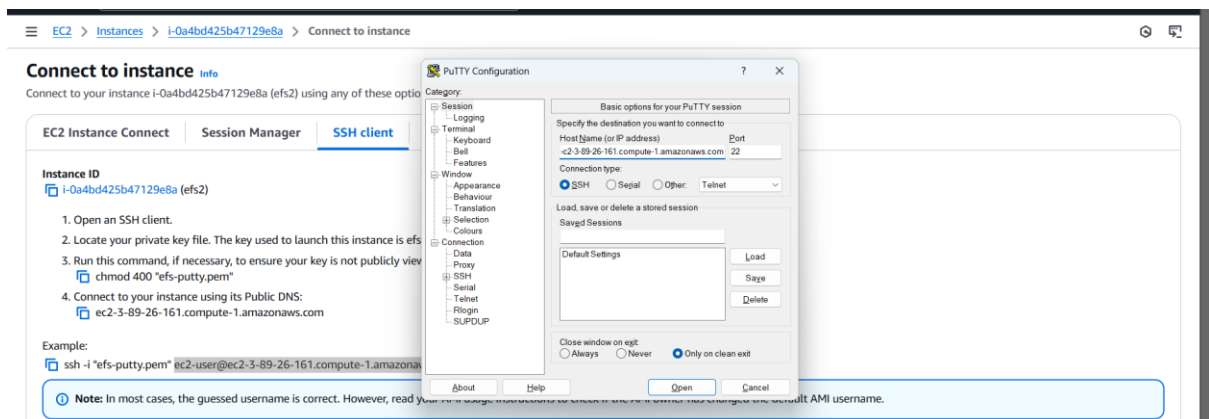
Give the path to the ppk key-pair for authentication



Connect to the instance.



Similarly open the putty and connect to efs2 with putty by giving its host id and the key pair ppk







## Yum install -y amazon-efs-utils

```
ELISA: CMDRUN TO LINK A MATCH. amazon-efs-utils
[root@ip-172-31-24-164 ec2-user]# yum install -y amazon-efs-utils
Last metadata expiration check: 0:00:14 ago on Thu Mar 13 05:15:39 2025.
Dependencies resolved.
=====
Package                Architecture Version      Repository    Size
-----
Installing:
amazon-efs-utils        x86_64      2.1.0-1.amzn2023      amazonlinux    1.2 M
Installing dependencies:
stunnel                 x86_64      5.58-1.amzn2023.0.2    amazonlinux    156 k
Transaction Summary
-----
Install 2 Packages
Total download size: 1.4 M
Installed size: 4.5 M
Downloading Packages:
(1/2): stunnel-5.58-1.amzn2023.0.2.x86_64.rpm      4.4 MB/s | 156 kB  00:00
(2/2): amazon-efs-utils-2.1.0-1.amzn2023.x86_64.rpm 22 MB/s | 1.2 MB  00:00
-----
Total                                     16 MB/s | 1.4 MB  00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : stunnel-5.58-1.amzn2023.0.2.x86_64      1/1
Installing : stunnel-5.58-1.amzn2023.0.2.x86_64      1/2
Running scriptlet: stunnel-5.58-1.amzn2023.0.2.x86_64 1/2
Installing : amazon-efs-utils-2.1.0-1.amzn2023.x86_64 2/2
Running scriptlet: amazon-efs-utils-2.1.0-1.amzn2023.x86_64 2/2
Verifying : amazon-efs-utils-2.1.0-1.amzn2023.x86_64 1/2
Verifying : stunnel-5.58-1.amzn2023.0.2.x86_64      2/2
Installed:
amazon-efs-utils-2.1.0-1.amzn2023.x86_64      stunnel-5.58-1.amzn2023.0.2.x86_64
Complete!
[root@ip-172-31-24-164 ec2-user]#
```

```
[root@ip-172-31-86-106 ec2-user]# yum install -y amazon-efs-utils
Amazon Linux 2023 Kernel Livepatch repository 121 kB/s | 14 kB  00:00
Dependencies resolved.
=====
Package                Architecture Version      Repository    Size
-----
Installing:
amazon-efs-utils        x86_64      2.1.0-1.amzn2023      amazonlinux    1.2 M
Installing dependencies:
stunnel                 x86_64      5.58-1.amzn2023.0.2    amazonlinux    156 k
Transaction Summary
-----
Install 2 Packages
Total download size: 1.4 M
Installed size: 4.5 M
Downloading Packages:
(1/2): amazon-efs-utils-2.1.0-1.amzn2023.x86_64.rpm 16 MB/s | 1.2 MB  00:00
(2/2): stunnel-5.58-1.amzn2023.0.2.x86_64.rpm      1.8 MB/s | 156 kB  00:00
-----
Total                                     11 MB/s | 1.4 MB  00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : stunnel-5.58-1.amzn2023.0.2.x86_64      1/1
Installing : stunnel-5.58-1.amzn2023.0.2.x86_64      1/2
Running scriptlet: stunnel-5.58-1.amzn2023.0.2.x86_64 1/2
Installing : amazon-efs-utils-2.1.0-1.amzn2023.x86_64 2/2
Running scriptlet: amazon-efs-utils-2.1.0-1.amzn2023.x86_64 2/2
Verifying : amazon-efs-utils-2.1.0-1.amzn2023.x86_64 1/2
Verifying : stunnel-5.58-1.amzn2023.0.2.x86_64      2/2
Installed:
amazon-efs-utils-2.1.0-1.amzn2023.x86_64      stunnel-5.58-1.amzn2023.0.2.x86_64
Complete!
[root@ip-172-31-86-106 ec2-user]#
```

## Open your AWS console and go to the EFS services

The screenshot shows the AWS Management Console interface. On the left is a sidebar with navigation links: Elastic File System, File systems, Access points, AWS Backup, AWS DataSync, AWS Transfer, and Documentation. The main content area displays the 'Amazon Elastic File System' page. It features a large heading 'Amazon Elastic File System' followed by the subheading 'Scalable, elastic, cloud-native NFS file system'. Below this is a brief description: 'Amazon Elastic File System (Amazon EFS) provides a simple, scalable, elastic file system for general purpose workloads for use with AWS Cloud services and on-premises resources.' A prominent orange button labeled 'Create file system' is visible. To the right of this button is a 'Pricing' section with the text: 'With EFS, there are no minimum fees. You pay only for the storage that you use, the data that you read and write, and any additional throughput that you provision.' Below this text is a link to 'Estimate your cost using the AWS Pricing Calculator' and another link to 'Learn more about pricing'.

## Create a file system

The screenshot shows a modal dialog titled "Create file system" with a close button (X) in the top right corner. The dialog contains the following fields and options:

- Create an EFS file system with recommended settings.** [Learn more](#)
- Name - optional**  
Name your file system.  
Input field: `EFS-ONE`  
Name can include letters, numbers, and `+-. _/` symbols, up to 256 characters.
- Virtual Private Cloud (VPC)**  
Choose the VPC where you want EC2 instances to connect to your file system.  
Dropdown menu: `vpc-001d4b527e6a58a9b` (default)
- Buttons at the bottom: **Cancel**, **Customize**, and **Create** (highlighted in orange).

## Navigate to the EFS that you created


The screenshot shows the AWS Management Console page for an EFS file system. The breadcrumb navigation is `Amazon EFS > File systems > fs-0f7fd7a2f123464dd`. The title is **EFS-ONE (fs-0f7fd7a2f123464dd)** with **Delete** and **Attach** buttons. The **General** tab is selected, showing the following details:

- Amazon resource name (ARN)**  
`arn:aws:elasticfilesystem:us-east-1:669376736724:file-system/fs-0f7fd7a2f123464dd`
- Performance mode**  
General Purpose
- Throughput mode**  
Elastic
- Lifecycle management**  
Transition into Infrequent Access (IA): 30 day(s) since last access  
Transition into Archive: 90 day(s) since last access  
Transition into Standard: None
- Availability zone**  
Regional
- Automatic backups**  
Enabled
- Encrypted**  
0f4f8ec6-2f91-47ee-becc-02a18a395d8d (aws/elasticfilesystem)
- File system state**  
Available
- DNS name**  
`fs-0f7fd7a2f123464dd.efs.us-east-1.amazonaws.com`
- Replication overwrite protection**  
Enabled

Navigate to network settings and select the security group that you created for the instances in those zones

us-east-1c	subnet-09fa5ff8d5d61f3b	172.31.88.66	Choose security groups ▼	Remove
			sg-06308802cf8665ecc launch-wizard-5	
us-east-1d	subnet-02e43ba98628d77	172.31.26.72	Choose security groups ▼	Remove
			sg-06308802cf8665ecc launch-wizard-5	

Save the changes

 **Success!**  
Submitted all mount target changes successfully for file system (fs-0f7fd7a2f123464dd)

[Amazon EFS](#) > [File systems](#) > fs-0f7fd7a2f123464dd

**EFS-ONE (fs-0f7fd7a2f123464dd)**

[Delete](#) [Attach](#)

Click on attach and copy the NFS client command

**Attach**

Mount your Amazon EFS file system on a Linux instance. [Learn more](#)

☒ Mount via DNS ☐ Mount via IP

Using the EFS mount helper:

```
sudo mount -t efs -o tls fs-0f7fd7a2f123464dd:/ efs
```

Using the NFS client:

```
sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsiz=1048576,hard,timeo=600,retrans=2,noresvport fs-0f7fd7a2f123464dd.efs.us-east-1.amazonaws.com:/ efs
```

See our user guide for more information. [Learn more](#)

[Close](#)

Paste the command in both the terminals and run

```
[complete!
[root@ip-172-31-24-164 ec2-user]# sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsiz=1048576,hard,timeo=600,retrans=2,noresvport fs-0f7fd7a2f123464dd.efs.us-east-1.amazonaws.com:/ efs
[root@ip-172-31-24-164 ec2-user]# cd efs
[root@ip-172-31-24-164 efs]# touch f1
[root@ip-172-31-24-164 efs]# ls
f1 f2
[root@ip-172-31-24-164 efs]#

[complete!
[root@ip-172-31-86-106 ec2-user]# sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsiz=1048576,hard,timeo=600,retrans=2,noresvport fs-0f7fd7a2f123464dd.efs.us-east-1.amazonaws.com:/ efs
[root@ip-172-31-86-106 ec2-user]# cd efs
[root@ip-172-31-86-106 efs]# ls
f1
[root@ip-172-31-86-106 efs]# touch f2
[root@ip-172-31-86-106 efs]#
```

Create files in one console those must be reflected in the other terminal too.

```
[root@ip-172-31-24-164 ~]# git clone https://github.com/manognavadla/AWSExample.git
Cloning into 'AWSExample'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 3 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.
[root@ip-172-31-24-164 ~]# ls
AWSExample f1 f2
[root@ip-172-31-24-164 ~]#
```

```
[root@ip-172-31-86-106 ~]# git clone https://github.com/manognavadla/AWSExample.git
bash: git: command not found
[root@ip-172-31-86-106 ~]# ls
AWSExample f1 f2
[root@ip-172-31-86-106 ~]#
```

If you clone the git repository it will be shared to the other instance too