

AWS EC2

Demo Document 6

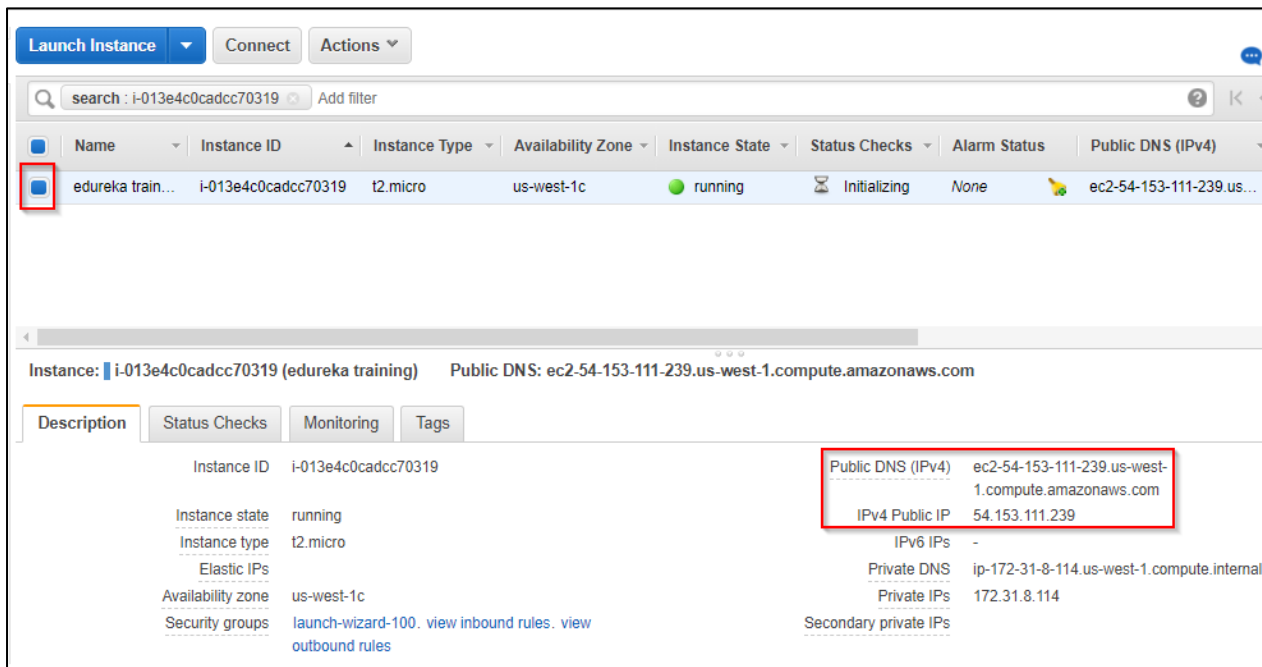
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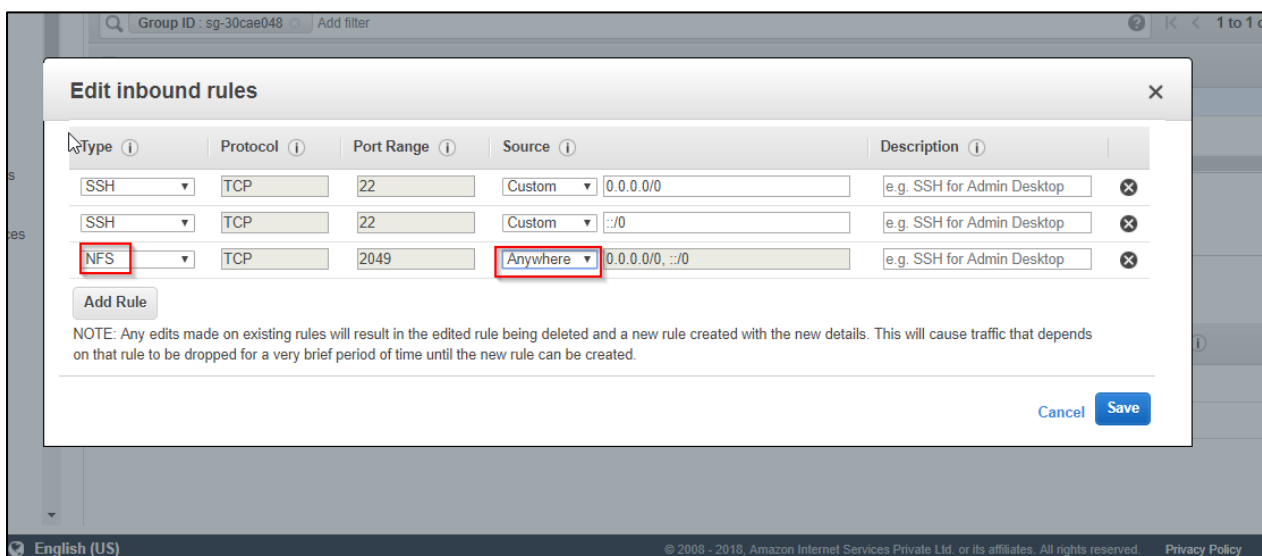
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To Attach EFS Volume to an EC2 Instance

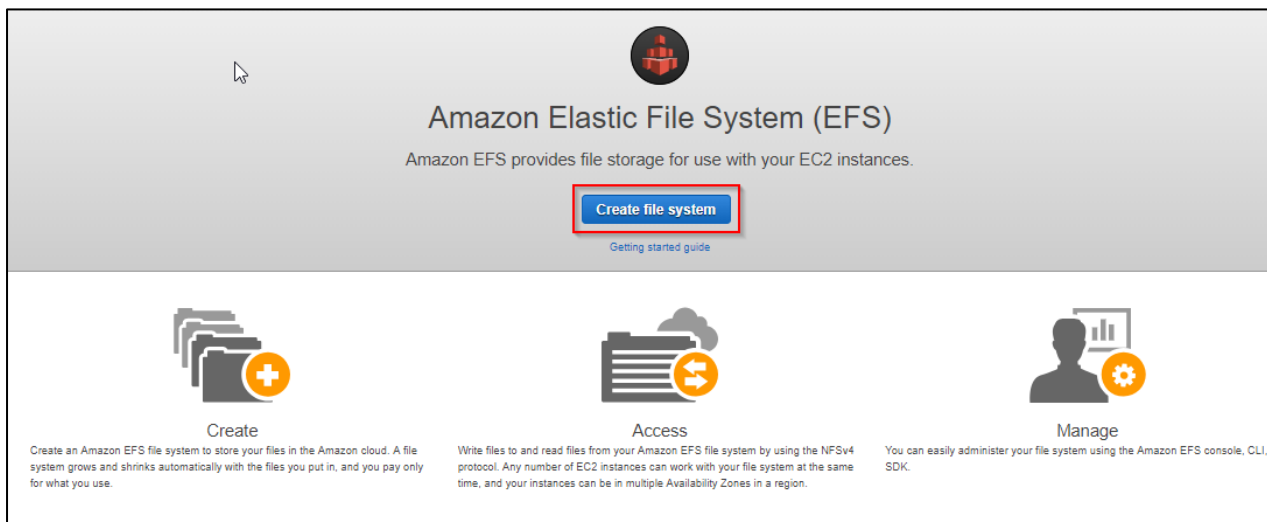
Step 1: Launch an EC2 Instance in the AWS Management console. Open an SSH client. (Connect using PuTTY) and locate your private key file. The wizard automatically detects the key that was used to launch the instance



Step 2: Go to Security Group and add NFS. Note that each EC2 instance that mounts the file system must consist a security group, allowing access to the mount target on the NFS port



Step 3: Go back to the console and select EFS. Now, click on **Create File System**



Step 4: Click on **Next Step**

Configure file system access

An Amazon EFS file system is accessed by EC2 instances running inside one of your VPCs. Instances connect to a file system by using a network interface called a mount target. Each mount target has an IP address, which we assign automatically or you can specify.

VPC:

Create mount targets

Instances connect to a file system by using mount targets you create. We recommend creating a mount target in each of your VPC's Availability Zones so that EC2 instances across your VPC can access the file system.

	Availability Zone	Subnet	IP address	Security groups
<input checked="" type="checkbox"/>	us-west-1a	<input type="text" value="subnet-300ba058 (default)"/>	<input type="text" value="Automatic"/>	<input type="text" value="sg-ff07e290 - default"/>
<input checked="" type="checkbox"/>	us-west-1c	<input type="text" value="subnet-310ba059 (default)"/>	<input type="text" value="Automatic"/>	<input type="text" value="sg-ff07e290 - default"/>

[Cancel](#) [Next Step](#)

Step 5: Add a name to EFS without changing any settings and click on **Next Step**

Add tags

You can add tags to describe your file system. A tag consists of a case-sensitive key-value pair. (For example, you can define a tag with key-value pair with key = Corporate Department and value = Sales and Marketing.) At a minimum, we recommend a tag with key = Name.

Key	Value
<input type="text" value="Name"/>	<input type="text" value="my first EFS file system"/>
<input type="button" value="Add New Key"/>	<input type="text"/>

Choose performance mode

We recommend General Purpose performance mode for most file systems. Max I/O performance mode is optimized for applications where tens, hundreds, or thousands of EC2 instances accessing the file system — it scales to higher levels of aggregate throughput and operations per second with a tradeoff of slightly higher latencies for file operations.

☒ General Purpose
☐ Max I/O

Choose throughput mode

Step 6: Review the settings and click on **Create File System**

Review and create

Review the configuration below before proceeding to create your file system.

File system access

VPC	Availability Zone	Subnet	IP address	Security groups
vpc-3f0ba057 (default)	us-west-1a	subnet-300ba058 (default)	Automatic	sg-ff07e290 - default
	us-west-1c	subnet-310ba059 (default)	Automatic	sg-ff07e290 - default

Optional settings

Tags

Performance mode General Purpose

Throughput mode Bursting

Encrypted No

Step 7: Note the **File system ID** and **DNS Name**

Create file system Actions

Name	File system ID	Metered size	Number of mount targets	Creation date
my first EFS file system	fs-c2fb11db	6.0 KiB	2	08/09/2018, 12:23:07 UTC

Other details [Manage throughput mode](#) Tags [Manage tags](#)

Owner ID 245376966395

Life cycle state Available

Performance mode General Purpose

Throughput mode Bursting

Encrypted No

File system access [Manage file system access](#)

DNS name fs-c2fb11db.efs.us-west-1.amazonaws.com ⓘ

[Amazon EC2 mount instructions](#)
[AWS Direct Connect mount instructions](#)

Mount targets

VPC	Availability Zone	Subnet	IP address	Mount target ID	Network interface ID	Security groups	Life cycle state
vpc-3f0ba057 (default)	us-west-1c	subnet-310ba059 (default)	172.31.3.213	fsmt-6aaa4573	eni-7050bf77	sg-30cae048 - launch-wizard-100	Available
	us-west-1a	subnet-300ba058 (default)	172.31.29.21	fsmt-6caa4575	eni-2c3a270d	sg-30cae048 - launch-wizard-100	Available

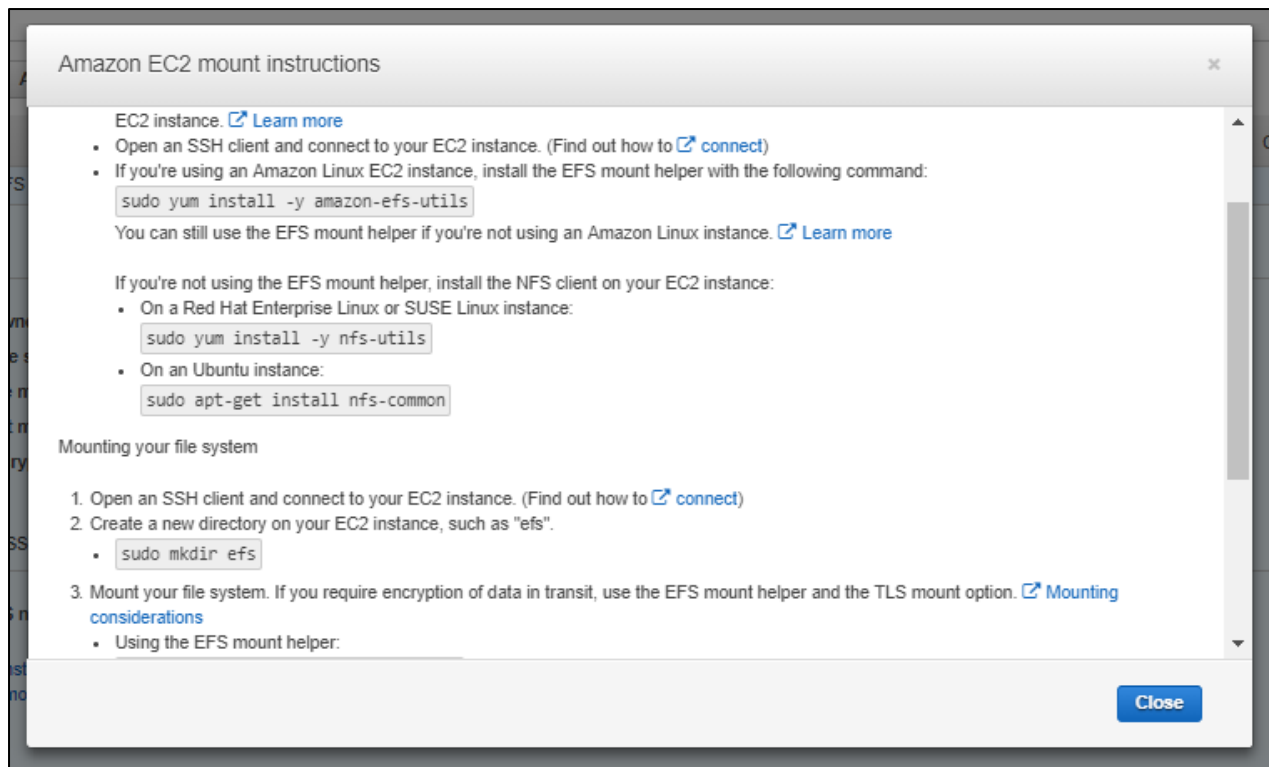
Step 8: Go to the configured Putty and log in using **ec2-user**

```

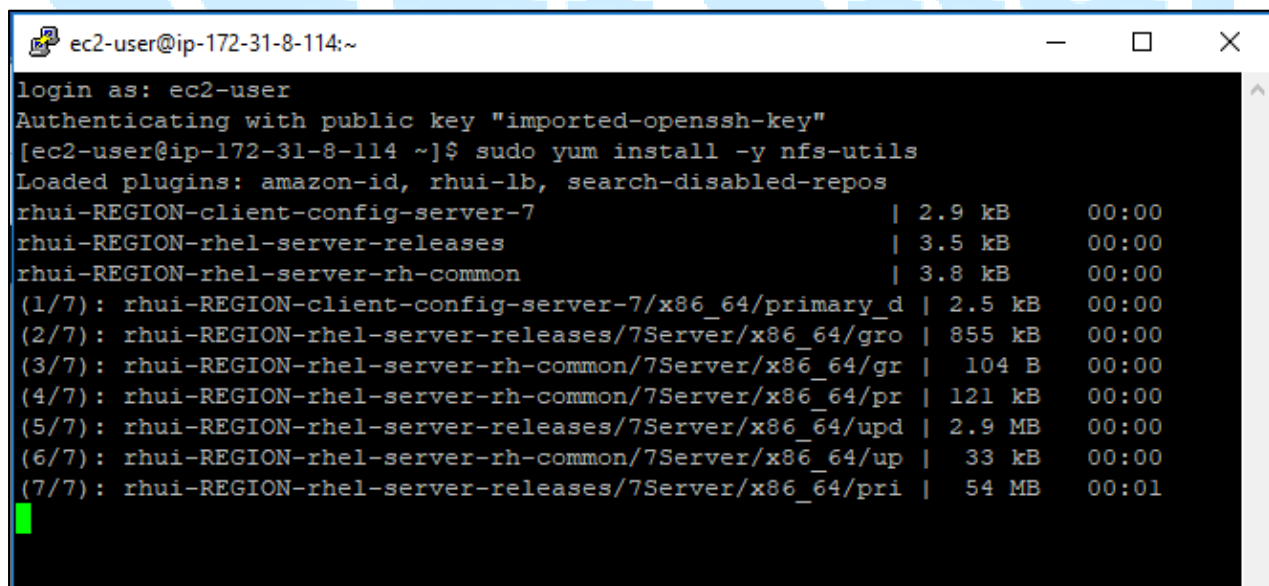
ec2-user@ip-172-31-8-114:~
login as: ec2-user
Authenticating with public key "imported-openssh-key"
[ec2-user@ip-172-31-8-114 ~]$

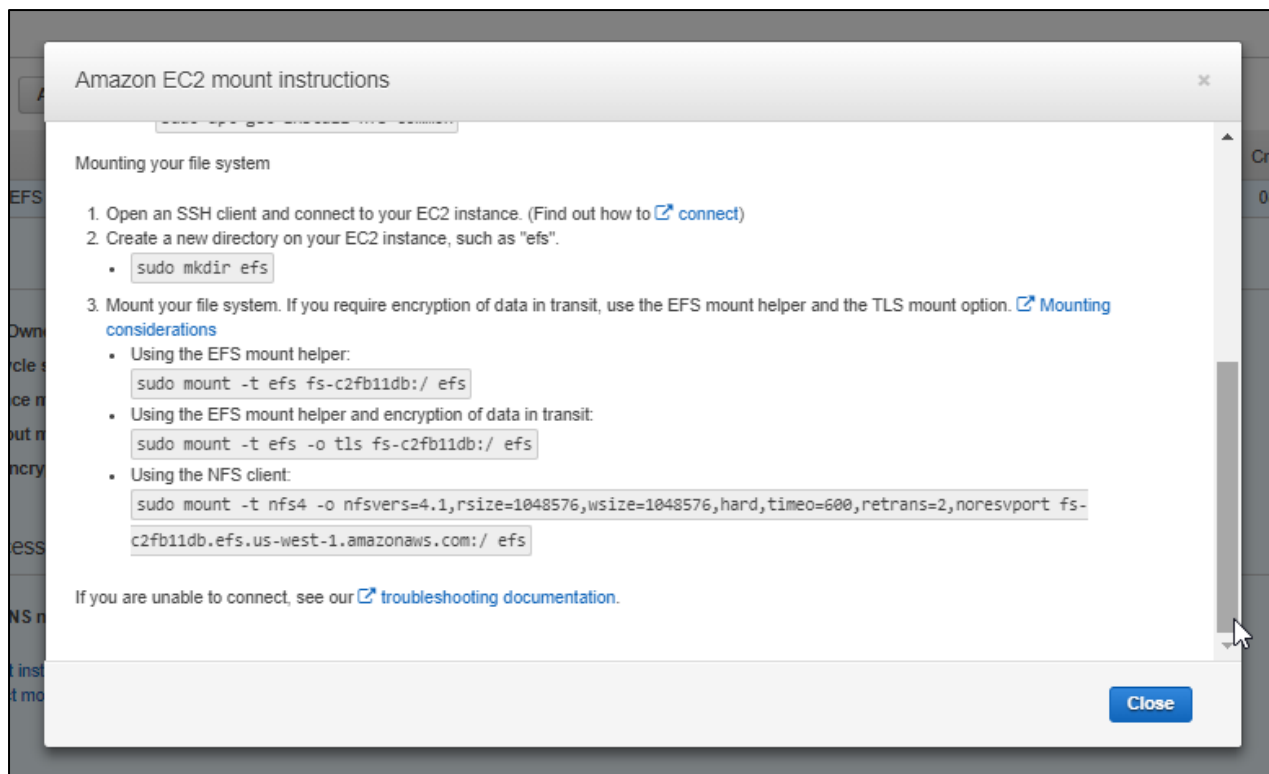
```

Step 9: Go to EFS, click on **Amazon EC2 Mount Instructions** and copy the commands

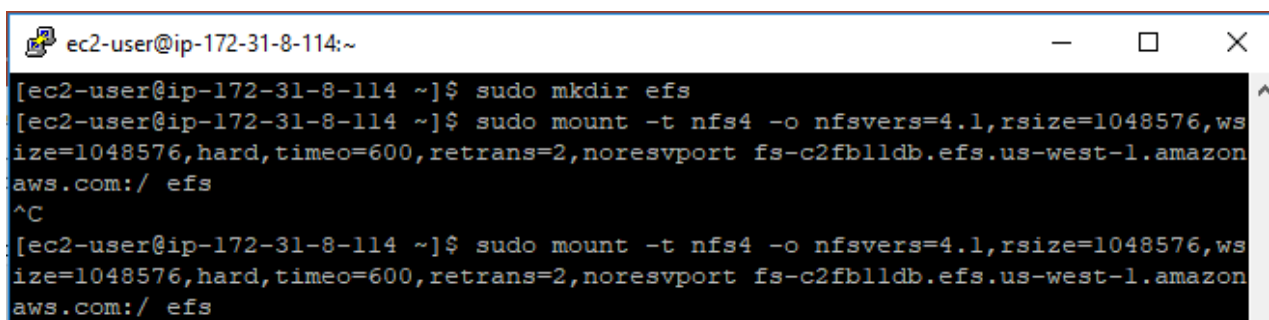


- ```
sudo yum install -y nfs-utils
```





- `sudo mkdir efs`
- `sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsiz=1048576,hard,timeo=600,retrans=2,noresvport fs-c2fb11db.efs.us-west-1.amazonaws.com:/ efs`



- To check the output whether EFS is mounted to your instance or not, enter the following command

```
df -h
```

```
ec2-user@ip-172-31-8-114:~
[ec2-user@ip-172-31-8-114 ~]$ sudo mkdir efs
[ec2-user@ip-172-31-8-114 ~]$ sudo mount -t nfs4 -o nfsvers=4.1,rsz=1048576,wsz=1048576,hard,timeo=600,retrans=2,noresvport fs-c2fbllldb.efs.us-west-1.amazonaws.com:/ efs
^C
[ec2-user@ip-172-31-8-114 ~]$ sudo mount -t nfs4 -o nfsvers=4.1,rsz=1048576,wsz=1048576,hard,timeo=600,retrans=2,noresvport fs-c2fbllldb.efs.us-west-1.amazonaws.com:/ efs
^C
[ec2-user@ip-172-31-8-114 ~]$ sudo mount -t nfs4 -o nfsvers=4.1,rsz=1048576,wsz=1048576,hard,timeo=600,retrans=2,noresvport fs-c2fbllldb.efs.us-west-1.amazonaws.com:/ efs
[ec2-user@ip-172-31-8-114 ~]$ df -h
```

| Filesystem                                 | Size | Used | Avail | Use% | Mounted on         |
|--------------------------------------------|------|------|-------|------|--------------------|
| /dev/xvda2                                 | 10G  | 1.3G | 8.8G  | 13%  | /                  |
| devtmpfs                                   | 474M | 0    | 474M  | 0%   | /dev               |
| tmpfs                                      | 496M | 0    | 496M  | 0%   | /dev/shm           |
| tmpfs                                      | 496M | 13M  | 483M  | 3%   | /run               |
| tmpfs                                      | 496M | 0    | 496M  | 0%   | /sys/fs/cgroup     |
| tmpfs                                      | 100M | 0    | 100M  | 0%   | /run/user/1000     |
| fs-c2fbllldb.efs.us-west-1.amazonaws.com:/ | 8.0E | 0    | 8.0E  | 0%   | /home/ec2-user/efs |

```
[ec2-user@ip-172-31-8-114 ~]$
```

## Conclusion

You have successfully mounted the EFS volume to an EC2 instance.