

CREATE AN EFS AND ATTACH TO TWO EC2 INSTANCE.

1)EFS:

Step1:

Create security group:

EC2 > Security Groups > Create security group

Create security group [Info](#)

A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. To create a new security group, complete the fields below.

Basic details

Security group name [Info](#)
EFS-SECURITY
Name cannot be edited after creation.

Description [Info](#)
nothing

VPC [Info](#)
vpc-017a8b8cb3e288760

Inbound rules [Info](#)

Type Info	Protocol Info	Port range Info	Source Info	Description - optional Info	
All traffic	All	All	Anywhere...	0.0.0.0/0	<input type="text"/>
				0.0.0.0/0	<input type="button" value="Delete"/>

✔ Security group (sg-086fc6ad41d1b253b | EFS-SECURITY) was created successfully

[Details](#)

EC2 > Security Groups > sg-086fc6ad41d1b253b - EFS-SECURITY

sg-086fc6ad41d1b253b - EFS-SECURITY [Actions](#)

Details

Security group name EFS-SECURITY	Security group ID sg-086fc6ad41d1b253b	Description nothing	VPC ID vpc-017a8b8cb3e288760
Owner 918694989556	Inbound rules count 1 Permission entry	Outbound rules count 1 Permission entry	

Step2: Create EFS

Amazon Elastic File System

Scalable, elastic, cloud-native NFS file system

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.

Create file system

Create an EFS file system with recommended settings.

Create file system

Name - optional

Name your file system.

EFSFILESYSTEM

File system type

Choose to either store data across multiple Availability Zones or within a single Availability Zone. [Learn more](#)

☒ Regional

Offers the highest levels of availability and durability by storing file system data across multiple Availability Zones within an AWS Region.

☐ One Zone

Provides continuous availability to data within a single Availability Zone within an AWS Region.

Automatic backups

Automatically backup your file system data with AWS Backup using recommended settings. Additional pricing applies. [Learn more](#)

☒ Enable automatic backups

Lifecycle management

Automatically save money as access patterns change by moving files into the Infrequent Access (IA) or Archive storage class. [Learn more](#)

Transition into Infrequent Access (IA)

Transition files to IA based on the time since they were last accessed in Standard storage.

30 day(s) since last access

Transition into Archive

Transition files to Archive based on the time since they were last accessed in Standard storage.

90 day(s) since last access

Transition into Standard

Transition files back to Standard storage based on when they are first accessed in IA or Archive storage.

None

Mount targets

A mount target provides an NFSv4 endpoint at which you can mount an Amazon EFS file system. We recommend creating one mount target per Availability Zone. [Learn more](#)

Availability zone	Subnet ID	IP address	Security groups	
us-east-1a	subnet-0a2fba5683498...	Automatic	<div>Choose security groups</div> <div>sg-086fc6ad41d1b253b EFS-SECURITY</div> <div>Show more (+1)</div>	<div>Remove</div>
us-east-1b	subnet-084be69c328ab...	Automatic	<div>Choose security groups</div> <div>sg-086fc6ad41d1b253b EFS-SECURITY</div>	<div>Remove</div>
us-east-1c	subnet-06effd87207bd...	Automatic	<div>Choose security groups</div> <div>sg-086fc6ad41d1b253b EFS-SECURITY</div>	<div>Remove</div>
us-east-1d	subnet-0f52cb772f5b0...	Automatic	<div>Choose security groups</div> <div>sg-086fc6ad41d1b253b EFS-SECURITY</div>	<div>Remove</div>
us-east-1f	subnet-00a7824704d2...	Automatic	<div>Choose security groups</div> <div>sg-086fc6ad41d1b253b EFS-SECURITY</div>	<div>Remove</div>

Success!

File system (fs-0c3719ce359f0da6d) is available.

View file system

Amazon EFS > File systems

File systems (1)

Filter by property values

< 1 >

	Name	File system ID	Encrypt ed	Total size	Size in Standard	Size in IA	Size in Archive	Provisioned Throughput (MiB/s)	File system state	Creat time
<input type="radio"/>	EFSFILESYS TEM	fs-0c3719ce359f0da6d	<input checked="" type="checkbox"/> Encrypt ed	6.00 KiB	6.00 KiB	0 Bytes	0 Bytes	-	<input checked="" type="checkbox"/> Available	Thu, 2024 05:24 GMT

Step3: Launch first instance:

Name and tags [Info](#)

Name

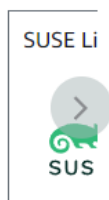
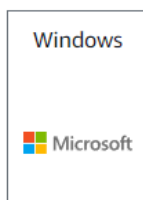
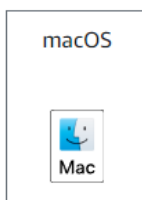
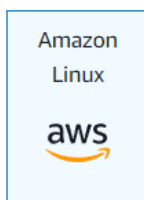
[Add additional tags](#)

▼ 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

 Search our full catalog including 1000s of application and OS images

Quick Start



[Browse more AMIs](#)

Including AMIs from
AWS, Marketplace and
the Community

▼ 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*

DILEEP1



[Create new key pair](#)

▼ Network settings [Info](#)

VPC - *required* [Info](#)

vpc-017a8b8cb3e288760
172.31.0.0/16

(default) ▼



Subnet [Info](#)

subnet-0a2fba56834986310

VPC: vpc-017a8b8cb3e288760 Owner: 918694989556
Availability Zone: us-east-1a IP addresses available: 4090 CIDR: 172.31.0.0/20



[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

Common security groups [Info](#)

Select security groups ▼

EFS-SECURITY sg-086fc6ad41d1b253b ✕
VPC: vpc-017a8b8cb3e288760



[Compare security group rules](#)

File systems

[Hide details](#)

☒ EFS

☐ FSx

▼ Shared file system 1

Remove

File system [Info](#)

fs-0c3719ce359f0da6d

Name: EFSFILESYSTEM Availability: Regional

Mount point [Info](#)

/mnt/efs/fs1

[EC2](#) > [Instances](#) > Launch an instance

🟢 Success

Successfully initiated launch of instance (i-0b3b9ede1ba6ff4)

▶ Launch log

Step 4: EC1 instance connect to web:

```
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023

Last login: Thu Apr 18 05:34:31 2024 from 18.206.107.29
[ec2-user@ip-172-31-10-75 ~]$ sudo -i
[root@ip-172-31-10-75 ~]# cd /mnt
[root@ip-172-31-10-75 mnt]# ls
efs
[root@ip-172-31-10-75 mnt]# cd efs
[root@ip-172-31-10-75 efs]# ls
fs1
[root@ip-172-31-10-75 efs]# cd fs1
[root@ip-172-31-10-75 fs1]# vi file1
[root@ip-172-31-10-75 fs1]# touch f2 f3 f4
[root@ip-172-31-10-75 fs1]# mkdir m1 m2 m3
[root@ip-172-31-10-75 fs1]# ls
f2 f3 f4 file1 m1 m2 m3
[root@ip-172-31-10-75 fs1]#
```

Step 5: Launch 2nd instance:

Name and tags [Info](#)

Name

EC2

[Add additional tags](#)

▼ **Application and OS Images (Amazon Machine Image)** [Info](#)

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SUSE Li





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Including AMIs from AWS, Marketplace and the Community

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Key pair name - *required*

DILEEP1

 [Create new key pair](#)

▼ Network settings [Info](#)

VPC - *required* [Info](#)

vpc-017a8b8cb3e288760
172.31.0.0/16

(default) ▼



Subnet [Info](#)

subnet-084be69c328ab97fd

VPC: vpc-017a8b8cb3e288760 Owner: 918694989556
Availability Zone: us-east-1b IP addresses available: 4090 CIDR: 172.31.80.0/20



 [Create new subnet](#) 

Auto-assign public IP [Info](#)

Enable ▼

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 ▼

EFS-SECURITY sg-086fc6ad41d1b253b ✕
VPC: vpc-017a8b8cb3e288760

 [Compare security group rules](#)

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

[EC2](#) > [Instances](#) > Launch an instance

 **Success**
Successfully initiated launch of instance (i-00d7850778259907b)

[▶ Launch log](#)

Step 6: EC2 instance connect to web:

```
EC2
#####
      \   /
     /   \
    /     \
   /       \
  /         \
 /           \
/             \
\             /
 \           /
  \         /
   \       /
    \     /
     \   /
      \ /

Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023

[ec2-user@ip-172-31-84-91 ~]$ sudo -i
[root@ip-172-31-84-91 ~]# cd /mnt
[root@ip-172-31-84-91 mnt]# ls
efs
[root@ip-172-31-84-91 mnt]# cd efs
[root@ip-172-31-84-91 efs]# cd fs1
[root@ip-172-31-84-91 fs1]# ls
f2 f3 f4 file1 m1 m2 m3
[root@ip-172-31-84-91 fs1]# mkdir m4
[root@ip-172-31-84-91 fs1]# ls
f2 f3 f4 file1 m1 m2 m3 m4
[root@ip-172-31-84-91 fs1]# cat file1
this is efsi
[root@ip-172-31-84-91 fs1]#
```

CREATE AN EBS AND ATTACH IT TO EC2 INSTANCE:

2) EBS:

Step 1: Create a EC2 instance:

Name and tags [Info](#)

Name


[Add additional tags](#)

▼ **Application and OS Images (Amazon Machine Image)** [Info](#)


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Quick Start


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SUSE Linux





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Key pair name - *required*

DILEEP1 ▼

🔄 [Create new key pair](#)

▼ Network settings [Info](#)

VPC - *required* [Info](#)

vpc-017a8b8cb3e288760
172.31.0.0/16

(default) ▼



Subnet [Info](#)

subnet-0a2fba56834986310

VPC: vpc-017a8b8cb3e288760 Owner: 918694989556
Availability Zone: us-east-1a IP addresses available: 4091 CIDR: 172.31.0.0/20



[Create new subnet](#)

Auto-assign public IP [Info](#)

Enable ▼

[EC2](#) > [Instances](#) > Launch an Instance

🟢 **Success**
Successfully initiated launch of Instance (i-0596b5ea8771b0e81)

▶ [Launch log](#)

Step 2: Create volume:

Create volume [Info](#)

Create an Amazon EBS volume to attach to any EC2 instance in the same Availability Zone.

Volume settings

Volume type [Info](#)

Provisioned IOPS SSD (io1) ▼

Size (GiB) [Info](#)

100

Min: 4 GiB, Max: 16384 GiB. The value must be an integer.

IOPS [Info](#)

300

Min: 100 IOPS, Max: 5000 IOPS (up to 50 IOPS per GiB)

Throughput (MiB/s) [Info](#)

Not applicable

Availability Zone [Info](#)

us-east-1a ▼

Successfully created volume vol-0a5196e3935d4e4a8.


Volumes (2) Info											<div><div>↺</div><div>1</div><div>↻</div></div>	
<input type="checkbox"/>	Name ▼	Volume ID ▼	Type ▼	Size ▼	IOPS ▼	Throughput ▼	Snapshot ▼	Created ▼	Availability Zone ▼			
<input type="checkbox"/>	-	vol-052a7402cab71718c	gp3	8 GiB	3000	125	snap-05df0f2...	2024/04/18 17:52 GMT+5:...	us-east-1a			
<input type="checkbox"/>	-	vol-0a5196e3935d4e4a8	io1	100 GiB	300	-	-	2024/04/18 17:55 GMT+5:...	us-east-1a			

Step 3: Attach a volume to an instance:

Attach volume [Info](#)

Attach a volume to an instance to use it as you would a regular physical hard disk drive.

Basic details


Volume ID
 `vol-0a5196e3935d4e4a8`

Availability Zone
us-east-1a

Instance [Info](#)

i-0596b5ea8771b0e81

▼




Only instances in the same Availability Zone as the selected volume are displayed.

Device name [Info](#)

/dev/sdf



▼

Recommended device names for Linux: `/dev/xvda` for root volume. `/dev/sd[f-p]` for data volumes.

 Newer Linux kernels may rename your devices to `/dev/xvdf` through `/dev/xvdp` internally, even when the device name entered here (and shown in the details) is `/dev/sdf` through `/dev/sdp`.

Cancel

Attach volume

 Successfully attached volume `vol-0a5196e3935d4e4a8` to instance `i-0596b5ea8771b0e81`. 

Step 4: EC2 instance connect to web:

```

~ ~ ~ #####
~ ~ \#####\
~ ~ \###|
~ ~ \#/\
~ ~ V~' -> https://aws.amazon.com/linux/amazon-linux-2023
~ ~
~ ~ _-
~ ~ /m/'
[ec2-user@ip-172-31-5-82 ~]$ sudo -i
[root@ip-172-31-5-82 ~]# 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    2.9M  188M   2% /run
/dev/xvda1       8.0G   1.5G   6.5G  19% /
tmpfs           475M    0   475M   0% /tmp
/dev/xvda128     10M    1.3M   8.7M  13% /boot/efi
tmpfs           95M    0    95M   0% /run/user/1000
[root@ip-172-31-5-82 ~]# mkfs -t xfs /dev/xvdf
meta-data=/dev/xvdf          isize=512    agcount=4, agsize=6553600 blks
               =              sectsz=512    attr=2, projid32bit=1
               =              crc=1          finobt=1, sparse=1, rmapbt=0
               =              reflink=1       bigtime=1 inobtcount=1
data         =              bsize=4096      blocks=26214400, imaxpct=25
               =              sunit=0        swidth=0 blks
naming        =version 2          bsize=4096   ascii-ci=0, ftype=1
log           =internal log      bsize=4096   blocks=16384, version=2
               =              sectsz=512    sunit=0 blks, lazy-count=1
realtime      =none              extsz=4096   blocks=0, rtextents=0

```

```
[root@ip-172-31-5-82 ~]# file -s /dev/xvdf
/dev/xvdf: SGI XFS filesystem data (blkisz 4096, inosz 512, v2 dirs)
[root@ip-172-31-5-82 ~]# mkdir -p madhu/vcube122
[root@ip-172-31-5-82 ~]# mount /dev/xvdf madhu/vcube122
[root@ip-172-31-5-82 ~]# 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  2.9M  188M  2% /run
/dev/xvda1      8.0G  1.5G  6.5G  19% /
tmpfs           475M  0   475M  0% /tmp
/dev/xvda128    10M  1.3M  8.7M  13% /boot/efi
tmpfs           95M  0   95M  0% /run/user/1000
/dev/xvdf       100G  746M  100G  1% /root/madhu/vcube122
[root@ip-172-31-5-82 ~]# cd madhu/vcube122
[root@ip-172-31-5-82 vcube122]# vi file1
[root@ip-172-31-5-82 vcube122]# ls
file1
[root@ip-172-31-5-82 vcube122]#
```