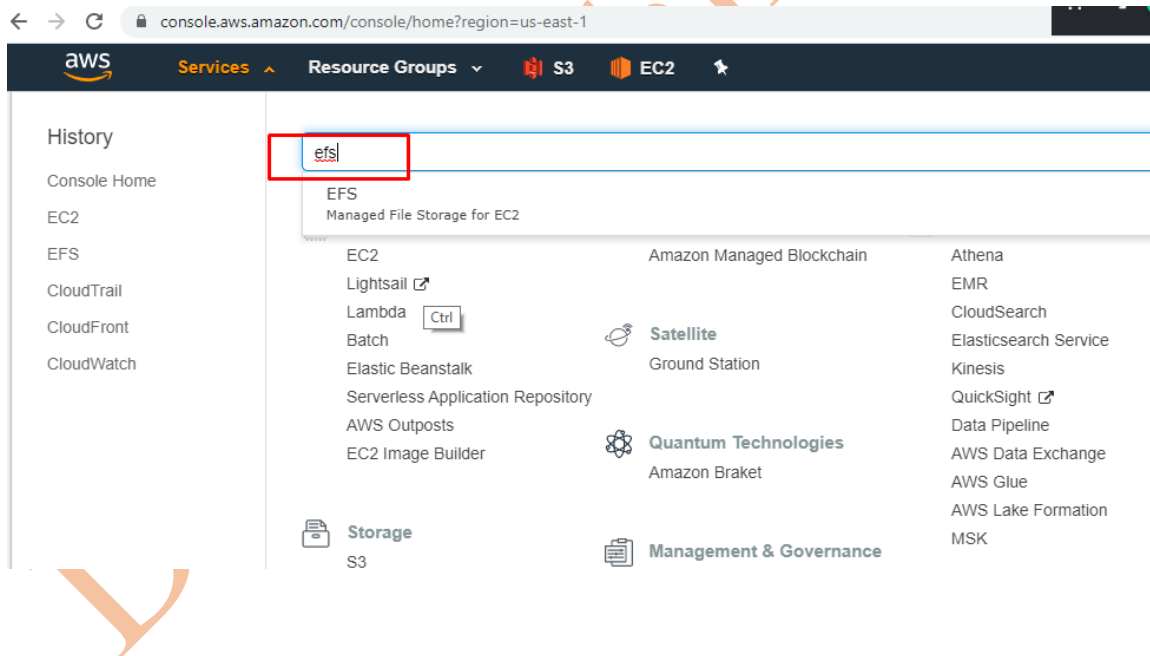
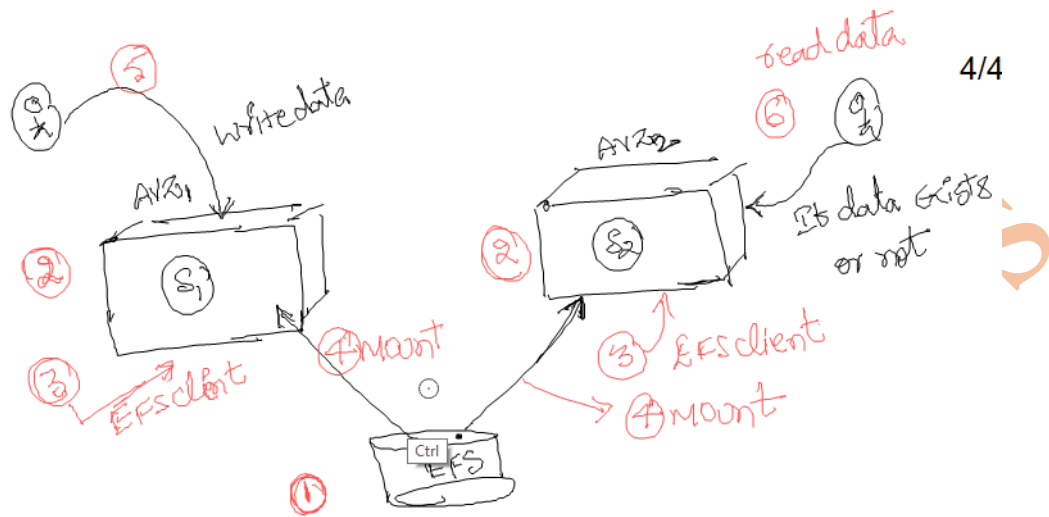


DVS Technologies Aws & Devops

1. Working with EFS



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Amazon Elastic File System
Scalable, elastic, cloud-native NFS file system

Create an EFS file system with service recommended settings.

Create 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.

What is Amazon Elastic File System?

Pricing (US)

Standard storage	\$0.30 per GB
Infrequent Access storage	\$0.025 per GB
Infrequent Access requests	\$0.010 per GB transferred
Provisioned Throughput	\$6.00 per MB/s

Create file system

Create an EFS file system with service recommended settings. [Learn more](#)

Name - optional
Name your file system.

dvsbatch4

Name must not be longer than 256 characters, and must only contain letters, numbers, and these characters: + - = . _ : /

Virtual Private Cloud (VPC)
Choose the VPC where you want EC2 instances to connect to your file system. [Learn more](#)

vpc-fae81987
default

Cancel Customize Create

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Name your file system.

dvbatch4

Name must not be longer than 256 characters, and must only contain letters, numbers, and these characters: + - = . _ : /

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 by changing patterns change by moving files into the EFS Infrequent Access storage class. [Learn more](#)

30 days since last access

Performance mode
Set your file system's performance mode based on IOPS required. [Learn more](#)

☒ **General Purpose**
Ideal for latency-sensitive use cases, like web serving environments and content management systems

☐ **Max I/O**
Scale to higher levels of aggregate throughput and operations per second

Throughput mode
Set how your file system's throughput limits are determined. [Learn more](#)

☒ **Bursting**
Throughput scales with file system size

☐ **Provisioned**
Throughput fixed at specified amount

Encryption
Choose to enable encryption of your file system's data at rest. Uses the AWS KMS service key (aws/elasticfilesystem) by default. [Learn more](#)

☐ Enable encryption of data at rest

▼ **Tags - optional**

Add tags to associate key-value pairs to your resource. [Learn more](#)

Tag key

Tag value - optional

You can add 49 more tag(s)

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Network

Virtual Private Cloud (VPC)
Choose the VPC where you want EC2 instances to connect to your file system. [Learn more](#)

vpc-fae81987
default

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		
us-east-1a	subnet-4...	Automatic	sg-08e5509c258dc09a2 opentoworld	Remove
us-east-1b	subnet-e...	Automatic	Choose s...	Remove
us-east-1c	subnet-4...	Automatic	Choose s...	Remove
us-east-1d	subnet-2...	Automatic	Choose s...	Remove
us-east-1e	subnet-e...	Automatic	Choose s...	Remove

Choose the VPC where you want EC2 instances to connect to your file system. [Learn more](#)

vpc-fae81987
default

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-4320861c	Automatic	sg-08e5509c258dc09a2 opentoworld	Remove
us-east-1b	subnet-e6cd6880	Automatic	sg-08e5509c258dc09a2 opentoworld	Remove
us-east-1c	subnet-4d2e8e6c	Automatic	sg-08e5509c258dc09a2 opentoworld	Remove
us-east-1d	subnet-2698ed5b	Automatic	sg-08e5509c258dc09a2 opentoworld	Remove
us-east-1e	subnet-e99d75d8	Automatic	sg-08e5509c258dc09a2 opentoworld	Remove
us-east-1f	subnet-133ea11d	Automatic	sg-08e5509c258dc09a2 opentoworld	Remove

[Add mount target](#)

You can only create one mount target per Availability Zone.

Cancel Previous **Next**

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Network access

Step 3 - optional
File system policy

Step 4
Review and create

Select one or more of these common policy options, or create a more advanced policy using the editor. [Learn more](#)

- ☐ Prevent root access by default*
- ☐ Enforce read-only access by default*
- ☐ Enforce in-transit encryption for all clients

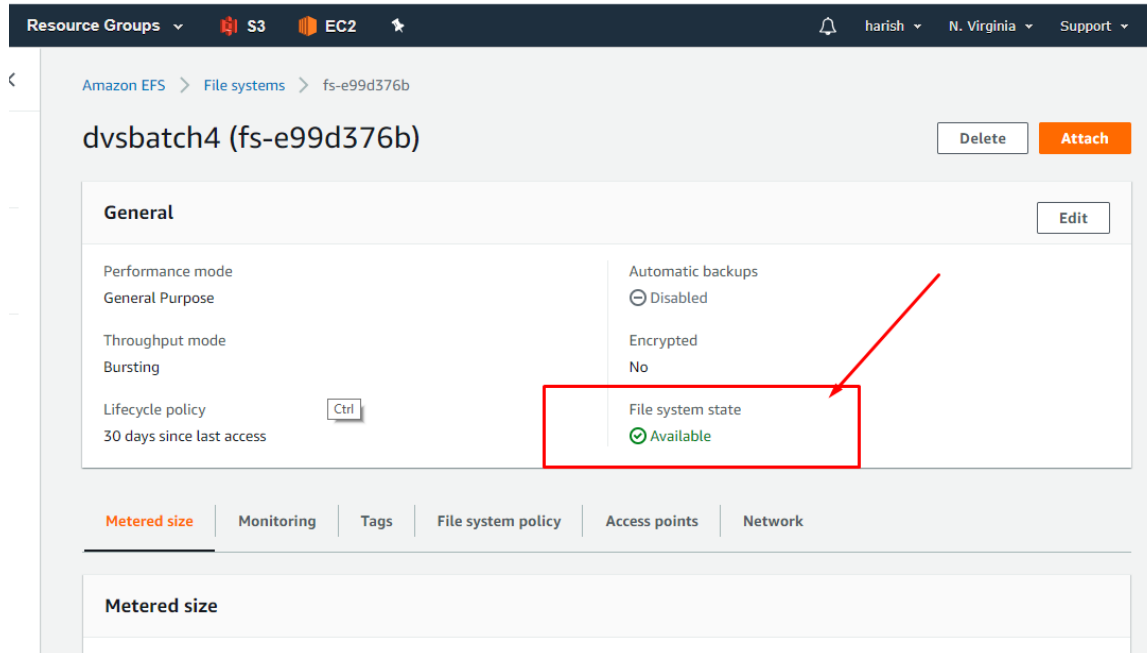
* Identity-based policies can override these default permissions.

Manual changes will prevent the use of checkboxes until the editor is cleared.

Cancel Previous **Next**

Cancel Previous **Create**

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Resource Groups S3 EC2 harish N. Virginia Support

Amazon EFS > File systems > fs-e99d376b

dvsbatch4 (fs-e99d376b)

Delete Attach

General Edit

Performance mode
General Purpose

Throughput mode
Bursting

Lifecycle policy
30 days since last access

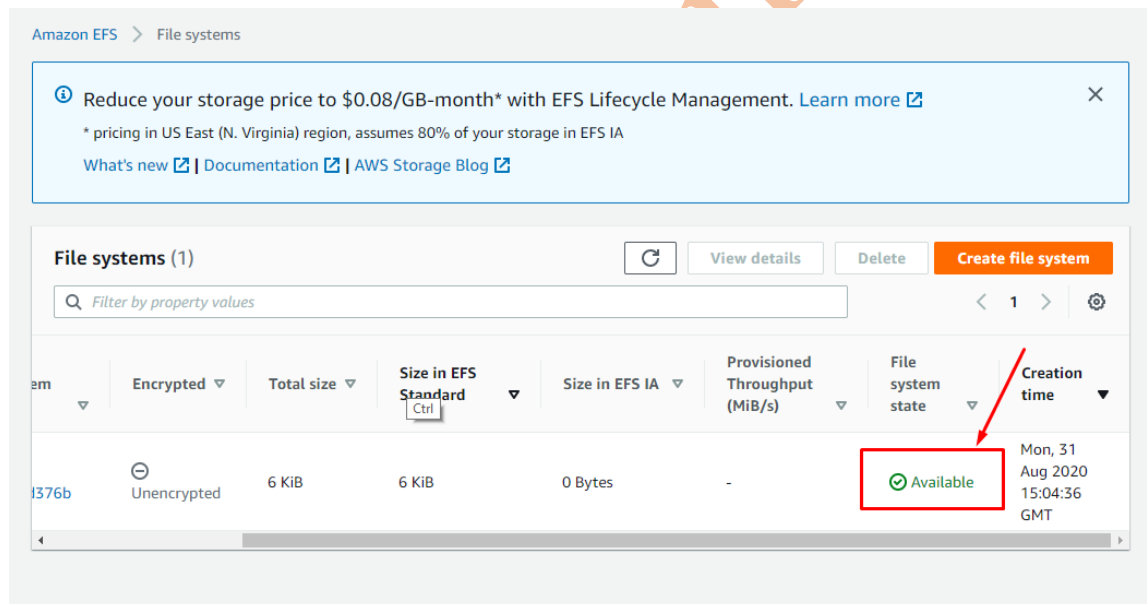
Automatic backups
Disabled

Encrypted
No

File system state
Available

Metered size Monitoring Tags File system policy Access points Network

Metered size



Amazon EFS > File systems

Reduce your storage price to \$0.08/GB-month* with EFS Lifecycle Management. [Learn more](#)

* pricing in US East (N. Virginia) region, assumes 80% of your storage in EFS IA

[What's new](#) | [Documentation](#) | [AWS Storage Blog](#)

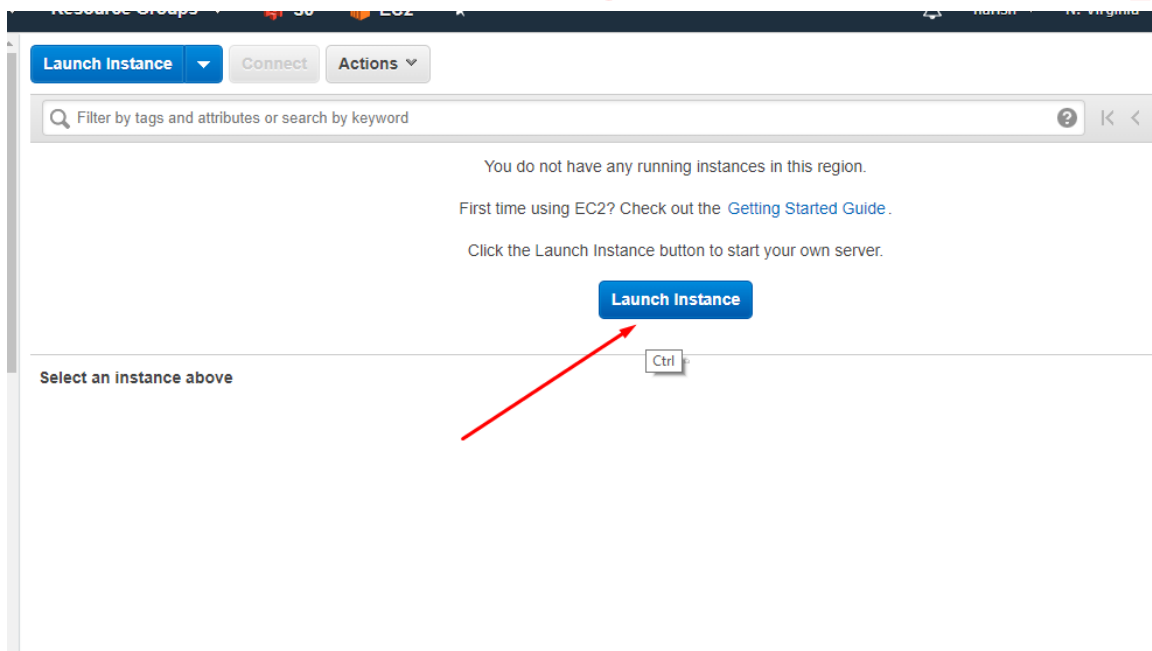
File systems (1) View details Delete Create file system

Filter by property values

File system	Encrypted	Total size	Size in EFS Standard	Size in EFS IA	Provisioned Throughput (MiB/s)	File system state	Creation time
fs-e99d376b	Unencrypted	6 KiB	6 KiB	0 Bytes	-	Available	Mon, 31 Aug 2020 15:04:36 GMT

Let's create our Servers in two diff availability zones:

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Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of Instances [Launch into Auto Scaling Group](#)

Purchasing option ☐ Request Spot instances

Network [Create new VPC](#)

Subnet [Create new subnet](#)

Auto-assign Public IP ☐ Yes

Placement group [Create new placement group](#)

Capacity Reservation

Domain join directory [Create new directory](#)

IAM role [Create new IAM role](#)

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Storage](#)

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1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 6: Configure Security Group

Amazon EC2 security groups.

Assign a security group: ☐ Create a new security group
☒ Select an existing security group

Security Group ID	Name	Description	Actions
<input type="checkbox"/> sg-68a47653	default	default VPC security group	Copy to new
<input type="checkbox"/> sg-0775e7b44bedc9602	launch-wizard-1	launch-wizard-1 created 2020-08-23T07:53:41.517+05:30	Copy to new
<input type="checkbox"/> sg-01592aea89d3082ed	launch-wizard-2	launch-wizard-2 created 2020-08-24T08:16:57.334+04:00	Copy to new
<input type="checkbox"/> sg-07e836b03a7715a9b	launch-wizard-3	launch-wizard-3 created 2020-08-25T18:20:20.729+04:00	Copy to new
<input checked="" type="checkbox"/> sg-08e5509c258dc09a2	opentoworld	launch-wizard-1 created 2020-08-07T19:47:10.516+04:00	Copy to new

Inbound rules for sg-08e5509c258dc09a2 (Selected security groups: sg-08e5509c258dc09a2)

Type	Protocol	Port Range	Source	Description
All traffic	All	All	0.0.0.0/0	

Cancel Previous Review and Launch

Second Server:

aws Services Resource Groups S3 EC2 harish N. Virginia Support

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances: 1 Launch into Auto Scaling Group

Purchasing option: ☐ Request Spot instances

Network: vpc-fae81987 | DONT_DELETE (default) Create new VPC

Subnet: No preference (default subnet in any Availability Zone) Create new subnet

Auto-assign Public IP: No preference (default subnet in any Availability Zone)

Placement group: subnet-e6cd5880 | DONT_DELETE | Default in us-east-1b

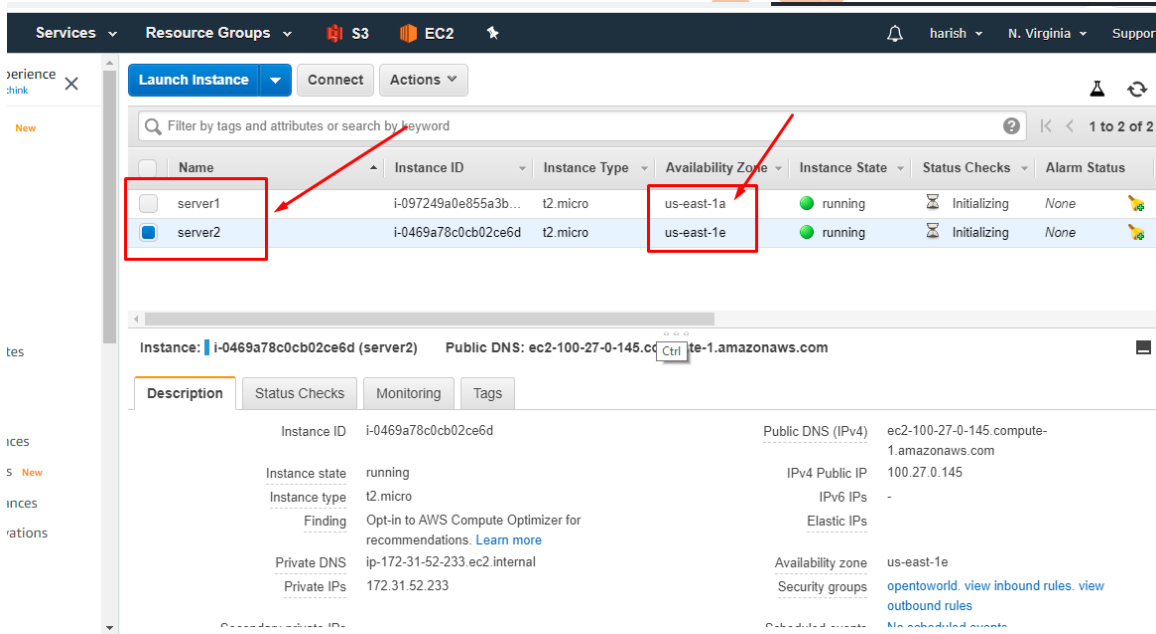
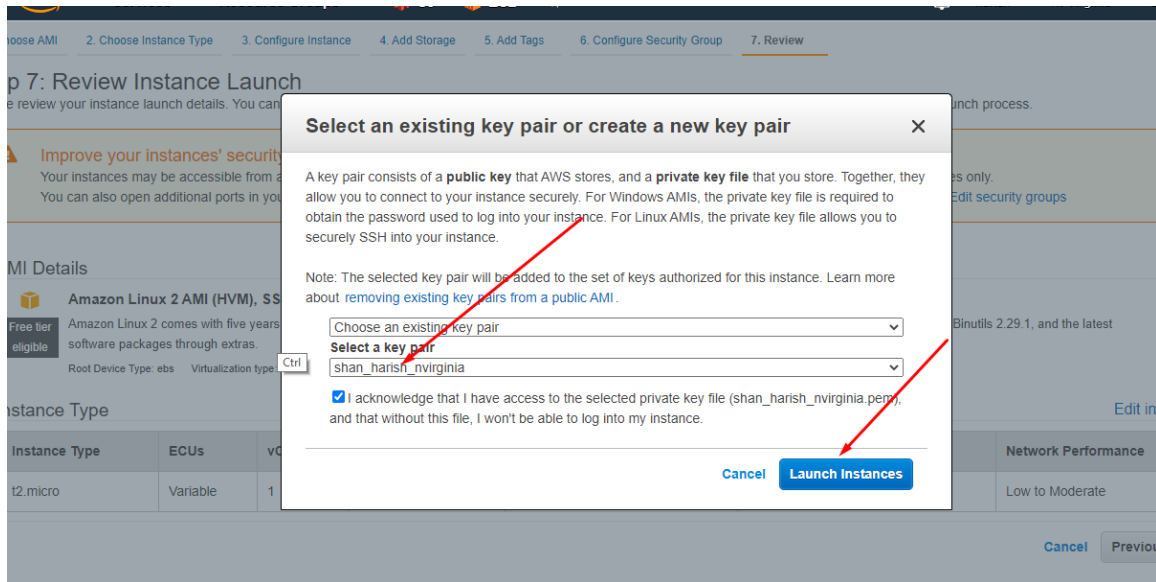
Capacity Reservation: subnet-e6cd5880 | DONT_DELETE | Default in us-east-1b

Domain join directory: No directory Create new directory

IAM role: None Create new IAM role

Cancel Previous Review and Launch Next: Add Storage

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Server1 & server2 Configuration:

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```
Using username "ec2-user".
Authenticating with public key "imported-openssh-key" from agent
```

```

_ _ | _ _ | _
_ | ( _ _ | /
_ _ | \ _ _ | _ |

Amazon Linux 2 AMI
```

```
https://aws.amazon.com/amazon-linux-2/
7 package(s) needed for security, out of 14 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-42-0 ~]$ sudo su -
[root@ip-172-31-42-0 ~]# hostnamectl set-hostname server1
[root@ip-172-31-42-0 ~]# bash
[root@server1 ~]# yum install amazon-efs-utils -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
---> Package amazon-efs-utils.noarch 0:1.27.1-1.amzn2 will be installed
--> Processing Dependency: stunnel >= 4.56 for package: amazon-efs-utils-1.27.1-1.amzn2.noarch
--> Running transaction check
---> Package stunnel.x86_64 0:4.56-6.amzn2.0.3 will be installed
--> Finished Dependency Resolution

Dependencies Resolved
```

```
https://aws.amazon.com/amazon-linux-2/
7 package(s) needed for security, out of 14 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-52-233 ~]$ sudo su -
[root@ip-172-31-52-233 ~]# hostnamectl set-hostname server2
[root@ip-172-31-52-233 ~]# bash
[root@server2 ~]# yum install amazon-efs-utils -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
---> Package amazon-efs-utils.noarch 0:1.27.1-1.amzn2 will be installed
--> Processing Dependency: stunnel >= 4.56 for package: amazon-efs-utils-1.27.1-1.amzn2.noarch
--> Running transaction check
---> Package stunnel.x86_64 0:4.56-6.amzn2.0.3 will be installed
--> Finished Dependency Resolution

Dependencies Resolved
```

Package	Arch	Version	Repository
---------	------	---------	------------

```
[root@server1 ~]# mkdir /app
[root@server1 ~]# mount -t efs fs-e99d376b:/ /app
[root@server1 ~]# df -hT /app
Filesystem                                Type      Size  Used Avail Use% Mounted on
fs-e99d376b.efs.us-east-1.amazonaws.com:/ nfs4      8.0E  0    8.0E  0% /app
[root@server1 ~]# cat /app/dvbatch4.txt
cat: /app/dvbatch4.txt: No such file or directory
[root@server1 ~]# echo "Hi Team this is Efs session" >/app/dvbatch4.txt
[root@server1 ~]# ls -l /app/dvbatch4.txt
-rw-r--r-- 1 root root 28 Aug 31 15:23 /app/dvbatch4.txt
[root@server1 ~]# cat /app/dvbatch4.txt
```

```
stunnel.x86_64 0:4.56-6.amzn2.0.3
Complete!
[root@server2 ~]#
[root@server2 ~]#
[root@server2 ~]#
[root@server2 ~]# mkdir /app
[root@server2 ~]# mount -t efs fs-e99d376b:/ /app
[root@server2 ~]# df -hT /app
Filesystem                                Type      Size  Used Avail Use% Mounted on
fs-e99d376b.efs.us-east-1.amazonaws.com:/ nfs4      8.0E  0    8.0E  0% /app
```

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```
fs-e99d376b.efs.us-east-1.amazonaws.com:/ nfs4 8.0E 0
8.0E 0% /app
[root@server1 ~]# cat /app/dvsbatch4.txt
cat: /app/dvsbatch4.txt: No such file or directory
[root@server1 ~]# echo "Hi Team this is Efs session" >/app/d
vsbatch4.txt
[root@server1 ~]# ls -l /app/dvsbatch4.txt
-rw-r--r-- 1 root root 28 Aug 31 15:23 /app/dvsbatch4.txt
[root@server1 ~]# cat /app/dvsbatch4.txt
Hi Team this is Efs session
Hi Lets append some data
[root@server1 ~]#
```

```
0.0B 0% /app
[root@server2 ~]# ls -l /app/dvsbatch4.txt
-rw-r--r-- 1 root root 28 Aug 31 15:23 /app/dvsbatch4.txt
[root@server2 ~]# cat /app/dvsbatch4.txt
Hi Team this is Efs session
[root@server2 ~]# echo "Hi Lets append some data" >> /app/d
sbatch4.txt
[root@server2 ~]#
```