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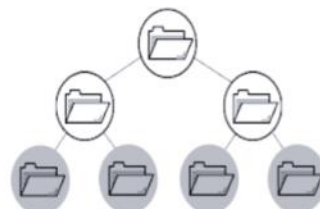
- ▶ Introduction to EFS (Elastic File System)
- ▶ Features of EFS
- ▶ Comparison of Storage Systems

## 1 Introduction to EFS

- [Introduction to EFS](#)

### ▶ Introduction to EFS

What is EFS?



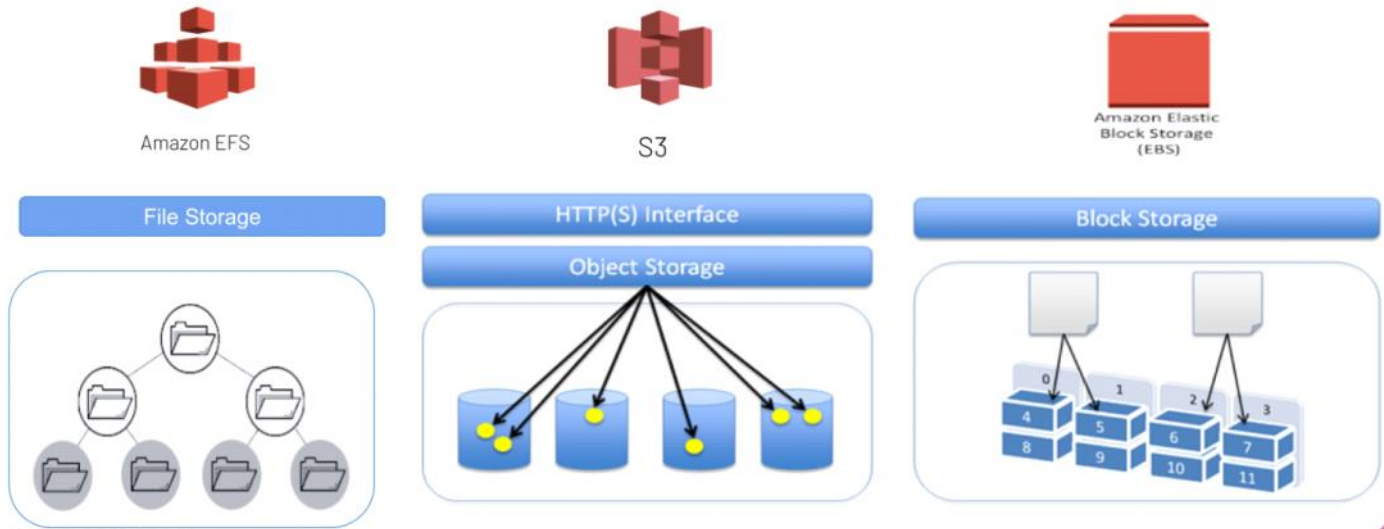
- Simple, scalable, fully managed **Elastic NFS file system.**

RDS gibi fully managed sistemdir. Yetkinin tamamen AWS de oldugunu dusunebiliriz biz sadece baslangictaki parametreleri

olusturuyoruz. Yukaridaki gorselde oldugu gibi dosyalama sistemi mevcuttur

## ► Introduction to EFS

### Recap of the Storage Options



EBS ==> Block Storage. Storage parcalardan olusmaktadir. EBS blok sisteminin kullanim seklidir. EBS ler root volume de olsa EC2 ya baglidir

S3 ==> veriler 3 parcadan olusmaktadir. Veri id si bu unsurlardan biridir. Ulasacagimiz veriye ID vasitasiyla ulasabiliriz. S3 teki veriye her yerden ulasabiliriz. EC2 ya bagli degiliz.

EFS ==> hiyerarsik bir yapi mevcuttur.

- Amazon Elastic File System (Amazon EFS) is a **serverless** and **set-and-forget** elastic file system. It can be used with AWS Cloud services and on-premises resources.
- Amazon EFS is designed to **increase and decrease the storage capacity** automatically as you **add** or **remove** files. So, it is a flexible-capacity storage solution.
- Since, Amazon EFS offers a simple web services interface, you can easily establish file systems and avoid the difficulties of deploying, patching, and maintaining complex file system configurations.

## 2 ► Features of EFS

- [Features of EFS](#)

## ► Features of EFS

### Scalability-Cost



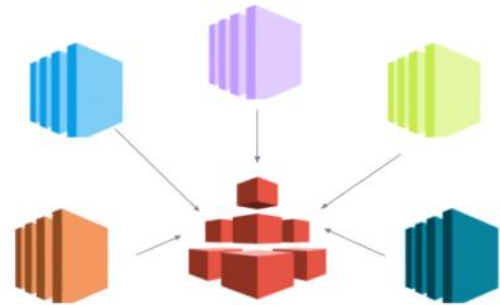
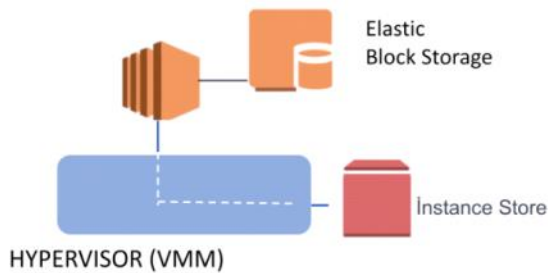
- Since EFS is scalable, it increases and decreases the storage capacity automatically as you add and delete files,
- There is no minimum fee or setup cost.

OLCEKLENEBİLİR. Bu özellikle de S3 e benzemektedir. Manuel olarak yapmaya gerek yoktur. Depolama kapasite azalma artma şeklinde olabilir ve otomatik olarak ölçeklenebilmektedir. (EBS de bir sınırlama mevcuttur) yani başlangıçta miktar belirtme söz konusu değildir.

Başlangıçta bir ücretleme istememektedir.  
Database için EBS kullanmaktadır.

## ► Features of EFS

### Attaching



- Unlike \*EBS, multiple Amazon EC2 instances (Linux only) even in different AZ's can be attached Amazon EFS file system at the same time.

\*Except Nitro-based instances in the same Availability Zone.

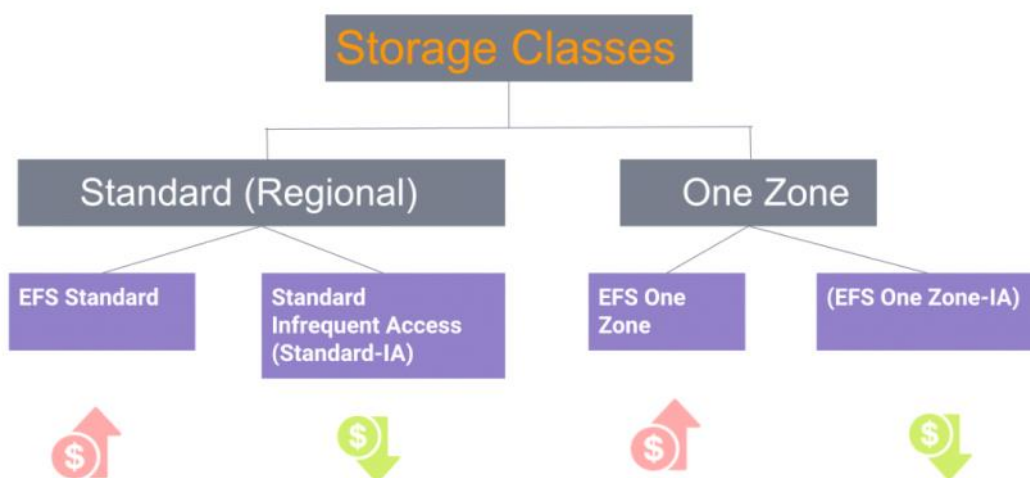
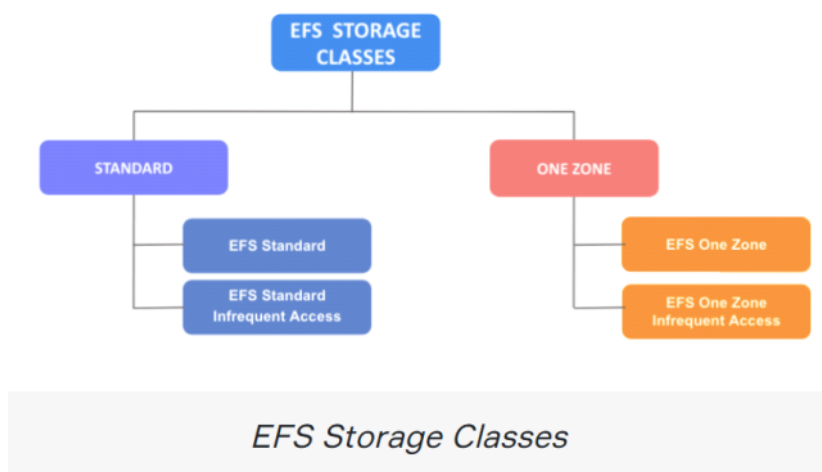
İlk ec2 actigimizda bir storage olmaktadır ve bu HYPERVISOR idi. Eklenen storage aynı AZ de olması gerekmektedir. Ama EFS de bu zorunluluk bulunmamaktadır. Ama istersek harici storage acabilmekteydik. Bir ec2 ya bağlı bir ebs den ziyade bir kac ec2 nun storage ulasmasini isteyebiliriz ve bunu da

EFS sağlamaktadır.

EFS ==> Farklı EC2 ların file sisteme ulaşma durumu mevcuttur.

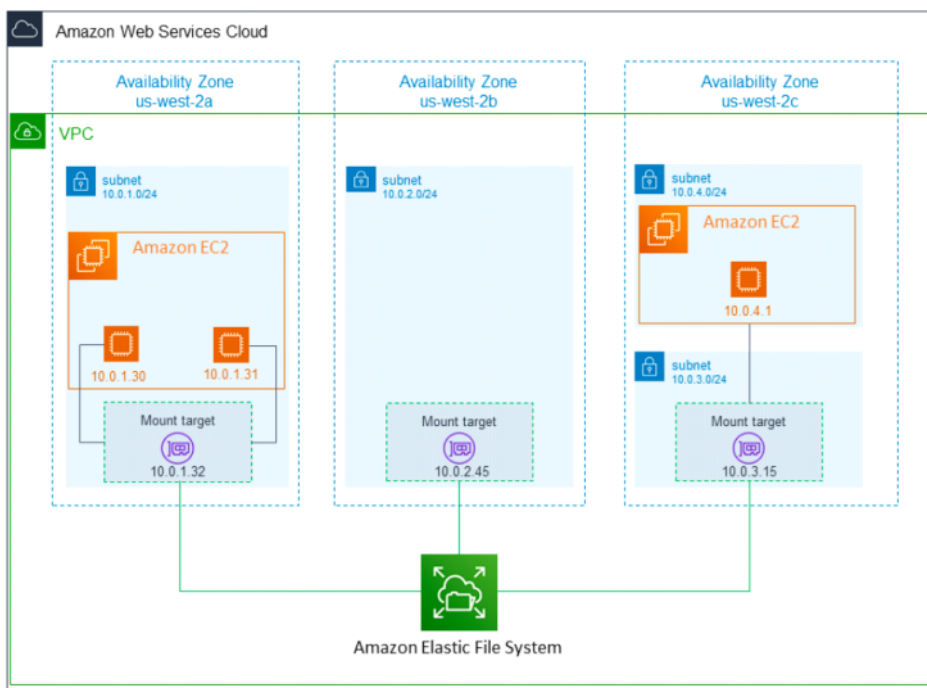
Peering ile farklı VPC'ler üzerinden file system'e ulaşabilmek mümkün.

- Amazon EFS file systems can **automatically** scale from gigabytes to petabytes of data without needing to provision storage.
- Compute services including Amazon EC2, Amazon ECS, Amazon Elastic Kubernetes Service (EKS), AWS Fargate, and AWS Lambda can be used compatible with the Amazon EFS file system.
- **Multiple compute instances** (even thousands of) can access an Amazon EFS file system at the same time.
- There is no minimum fee or setup cost and **you pay only for the storage used by your file system.**
- Amazon EFS is compatible with **all Linux-based AMIs** for Amazon EC2. It is **not supported on Windows instances.**
- [EFS Storage Classes](#)

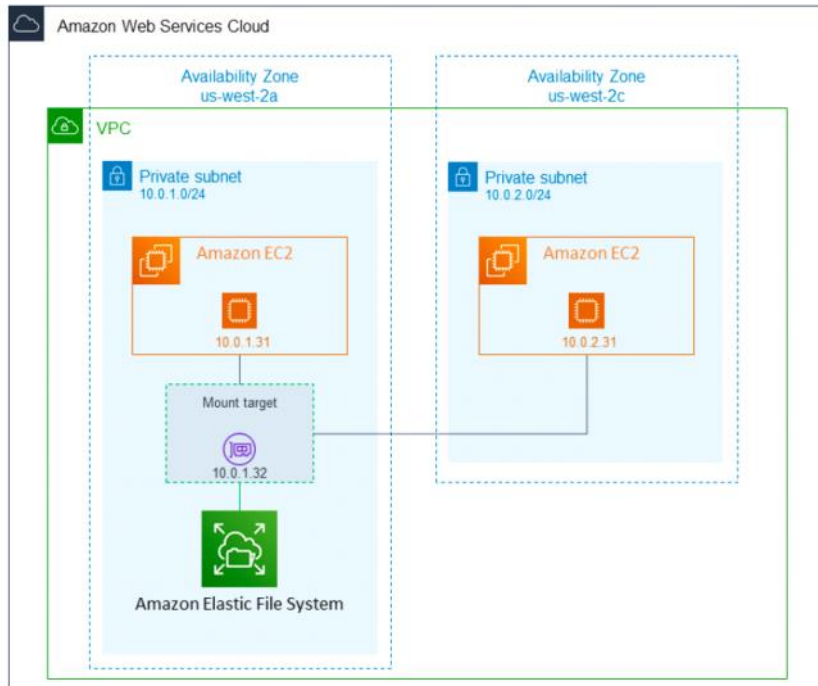


- Amazon EFS offers you the choice of creating file systems using two main types of storage classes.

- **Standard**
  - **One Zone**
- Under these two types of storage classes AWS offers 4 types of storage classes that are designed for different use cases:
  - **EFS Standard:** A regional storage class for **frequently** accessed data.  
It offers the highest levels of availability and durability by storing file system data redundantly across multiple Availability Zones in an AWS Region.
  - **EFS Standard-Infrequent Access (IA) :** A regional storage class for **infrequently** accessed data.  
It offers the highest levels of availability and durability by storing file system data redundantly across multiple Availability Zones in an AWS Region.
  - **EFS One Zone :** For **frequently** accessed files stored redundantly within a *single Availability Zone* in an AWS Region.
  - **EFS One Zone-IA :** A lower-cost storage class for **infrequently** accessed files stored redundantly within a *single Availability Zone* in an AWS Region.
  - [Mount Target](#)
  - To **access** your Amazon EFS file system in a VPC, you create **one** or **more mount targets** in the VPC.
  - You can create **multiple mount targets** in each availability Zone in the AWS Region for the file systems using **Standard** storage classes, like the picture seen below.



- As for file systems using **One Zone** storage classes, you can create only a **single mount target** that is in the same Availability Zone as the file system.



## 3 Comparison of Storage System

- [Comparing EFS with EBS and S3](#)



Amazon EFS



S3



EBS

- Cost Optimized : S3 > EBS > EFS
- Speed : EBS , EFS > S3
- EC2 mount : S3 : No  
EBS : Single\*  
EFS : Multiple
- Storage Capacity : S3, EFS =  $\infty$  vs. EBS = 16 TB





Amazon EFS



S3



EBS

- Large quantities of data,
- Large analytic workloads.
- Global content management
- Website images and videos,
- Data analytics of mobile/web applications.
- Data which is needed to be accessed from anywhere.
- High IOPS required data ,
- Database management.

<https://aws.amazon.com/efs/enterprise-applications/>

		File Amazon EFS	Object Amazon S3	Block Amazon EBS
Performance	Per-operation latency	Low, consistent	Low, for mixed request types, and integration with CloudFront	Lowest, consistent
	Throughput scale	Multiple GBs per second	Multiple GBs per second	Single GB per second
Characteristics	Data Availability/Durability	Stored redundantly across multiple AZs	Stored redundantly across multiple AZs	Stored redundantly in a single AZ
	Access	One to thousands of EC2 instances or on-premises servers, from multiple AZs, concurrently	One to millions of connections over the web	Single EC2 instance in a single AZ
	Use Cases	Web serving and content management, enterprise applications, media and entertainment, home directories, database backups, developer tools, container storage, big data analytics	Web serving and content management, media and entertainment, backups, big data analytics, data lake	Boot volumes, transactional and NoSQL databases, data warehousing & ETL

#### • How is Amazon EFS different than Amazon S3?

Amazon **EFS** provides a traditional file-sharing permissions model, **file-based** storage, via the NFSv4 protocol.

Amazon **S3** is an **object-based** storage platform that uses a simple API for storing and accessing data.

#### • How is Amazon EFS different than Amazon EBS?

Amazon **EFS** provides shared file storage for use with compute instances both in the AWS Cloud and On-premises servers. But **EBS** is designed for cloud purposes.

While **EFS** can be mounted multiple EC2 instances, **EBS** can only be mounted **single** Amazon EC2 instance\*.

**\*Exception:** Multiple EC2 Nitro System Based Instances can be mounted single EBS

- Amazon EFS'nin Amazon S3'ten farkı nedir?

Amazon EFS , NFSv4 protokolü aracılığıyla geleneksel bir dosya paylaşım izinleri modeli, **dosya tabanlı** depolama sağlar.

Amazon S3, verileri depolamak ve verilere erişmek için basit bir API kullanan **nesne tabanlı** bir depolama platformudur.

- Amazon EFS'nin Amazon EBS'den farkı nedir?

Amazon EFS, hem AWS Cloud hem de Şirket içi sunucularda bilgi işlem örnekleriyle kullanım için paylaşılan dosya depolama alanı sağlar. Ancak EBS, bulut amaçları için tasarlanmıştır.

EFS, birden çok EC2 bulut sunucusuna monte edilebilirken, EBS yalnızca **tek bir** Amazon EC2 bulut sunucusuna bağlanabilir \*.

\* **İstisna** : Birden fazla EC2 Nitro Sistem Tabanlı Eşgörünüm tek bir EBS'ye monte edilebilir

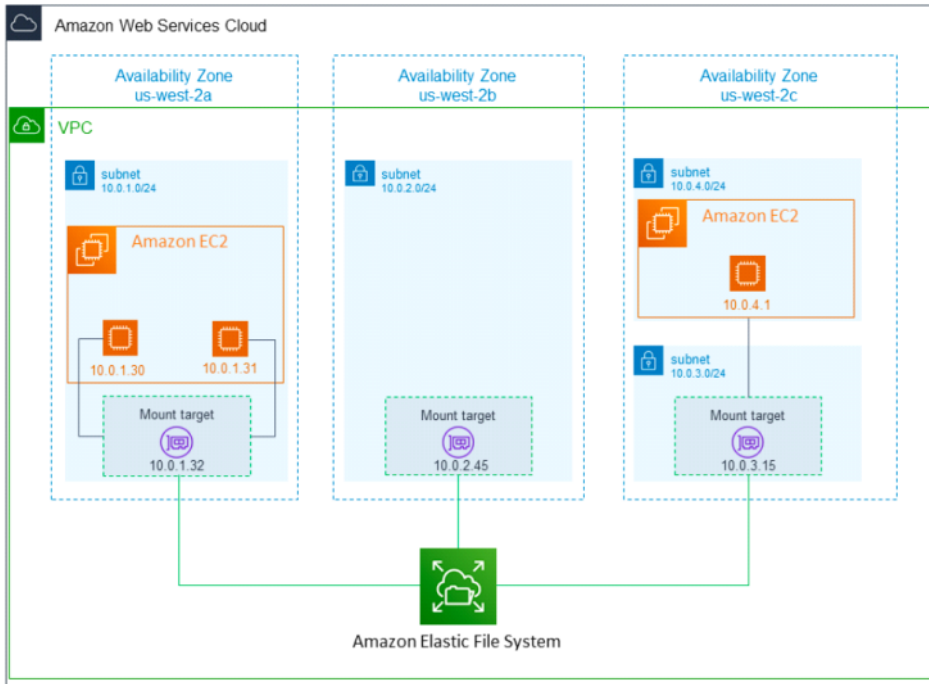
Amazon EFS, Amazon EC2 ile birlikte kullanılmak üzere tasarlanmış olan bir **dosya depolama hizmetidir**. Amazon EFS, bir dosya sistemi arabirimi ve dosya sistemi erişim semantiği (yüksek tutarlılık ve dosya kilitleme gibi) sunmasının yanı sıra bu depolama hizmetine binlerce Amazon EC2 bulut sunucusu tarafından aynı anda erişim sağlanabilir.

**Amazon EBS**, Amazon EC2 ile birlikte kullanılmak üzere tasarlanmış olan bir **blok düzeyinde depolama hizmetidir**.

Amazon EBS, tek bir EC2 bulut sunucusundan gelen ve veri erişimi için en düşük gecikme süresine ihtiyaç duyan iş yükleri için yüksek performans sunabilir.

**Amazon S3** bir **nesne depolama hizmetidir**. Amazon S3, verileri her yerden erişilebilen bir İnternet API'si aracılığıyla kullanıma sunar.

Asagidaki mimariyi Hands-on da yapacagiz



Öncelikle security grouplari olusturacagiz (EC2 lar ve EFS ler icin)

Ec2 icin;





### 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

**Basic details**

Security group name [Info](#)

EC2 SecGrp

Name cannot be edited after creation.

Description [Info](#)

EC2 SecGrp

VPC [Info](#)

vpc-282cb155

**Inbound rules** [Info](#)

Type <a href="#">Info</a>	Protocol <a href="#">Info</a>	Port range <a href="#">Info</a>	Source <a href="#">Info</a>
SSH	TCP	22	Anywhere... <a href="#">Info</a>
<div>0.0.0.0/0</div>			
<div>Add rule</div>			



Tekrar

EFS için;



Source yi ec2 ya gore custom etmek gerekmektedir.  
**Olusturdugumuz sec group a ait Ec2 lar EFS e ulasabilecek anlamindadir.**

Source [Info](#)

EC2 SecGrp | sg-007ed4bfff3b4ea598

Custom

Q

sg-

**Basic details**

Security group name [Info](#)

EFS SecGrp

Name cannot be edited after creation.

Description [Info](#)

EFS SecGrp

VPC [Info](#)

vpc-282cb155

**Inbound rules** [Info](#)

Type <a href="#">Info</a>	Protocol <a href="#">Info</a>	Port range <a href="#">Info</a>	Source <a href="#">Info</a>
NFS	TCP	2049	Custom
<div>sg-007ed4bfff3b4ea598</div>			
<div>Add rule</div>			



Kaynak kismini yani EC2 lari olusturalim

```
### Step 3 - Create EC2 :  
- Configure First Instance in N.Virginia  
  
```text  
AMI           : Amazon Linux 2  
Instance Type : t2.micro  
Network       : default  
Subnet        : default  
Security Group : EC2_SecGrp  
  Sec.Group Name : EC2_SecGrp  
Tag           :  
  Key          : Name  
  Value        : EC2-1  
```
```

```
```text  
AMI           : Amazon Linux 2  
Instance Type : t2.micro  
Network       : default  
Subnet        : default  
Security Group : EC2_SecGrp  
  Sec.Group Name : EC2_SecGrp  
Tag           :  
  Key          : Name  
  Value        : EC2-2  
```
```

Aynı AZ da calismasi icin number of instance yi 2 diyelim

Number of instances ⓘ  Launch into Auto Scaling Group ⓘ

### Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an Amazon EC2 security groups.

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

| Security Group ID                                       | Name       | Description                |
|---|------------|----------------------------|
| <input type="checkbox"/> sg-f114b1e8                    | default    | default VPC security group |
| <input checked="" type="checkbox"/> sg-007ed4b73b4ea598 | EC2_SecGrp | EC2_SecGrp                 |
| <input type="checkbox"/> sg-04442e4525dd8a783           | EFS_SecGrp | EFS_SecGrp                 |

Isim verelim EC2 lara;

Instances (1/2) ⓘ  
Filter instances  
Name  
☐ EC2-1  
☒ EC2-2

## Part 2 - Creating EFS

Her Region icin farkli bir fiyatlandirma olabilmektedir.

## 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 service recommended settings.

Create file system

```
Name           : FirstEFS  
Virtual Private Cloud (VPC) : Default VPC (Keep default)  
Availability and Durability : Regional (Keep default)  
```
```

**Create file system** ✕

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

**Name - optional**  
Name your file system.  
  
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](#)  
  
default

**Availability and Durability**  
Choose Regional (recommended) to create a file system using regional storage classes. Choose One Zone to create a file system using One Zone storage classes. [Learn more](#)

☒ **Regional**  
Stores data redundantly across multiple AZs

☐ **One Zone**  
Stores data redundantly within a single AZ

## Customize

**File system settings**

**General**

**Name - optional**  
Name your file system.  
  
Name must not be longer than 256 characters, and must only contain letters, numbers, and these characters: + - = \_ . : /


**Availability and Durability**  
Choose Regional (recommended) to create a file system using regional storage classes. Choose One Zone to create a file system using One Zone storage classes. [Learn more](#)

☒ **Regional**  
Stores data redundantly across multiple AZs

☐ **One Zone**  
Stores data redundantly within a single AZ

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

☐ Enable automatic backups

 We recommend that you create a backup policy for your file system

**Lifecycle management**  
Automatically save money as access patterns change by moving files into the Standard - Infrequent Access storage class. [Learn more](#)

**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

**Performance mode** : EFS yi ne amacla kullandigimizi gore secenekler secilebilir. Sirket icin ise performans onemli olmamakla birlikte data analitik durumlarinda performans beklentimiz olabilir. (saniye basi read write sayisi secenekler konusunda yonlendirebilir)

**Throughput mode**: veri/saniye yani debi de diyebiliriz

**Provisioned**: secersek ayrica ucretlendirilir



IOPS



Throughput

**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](#)

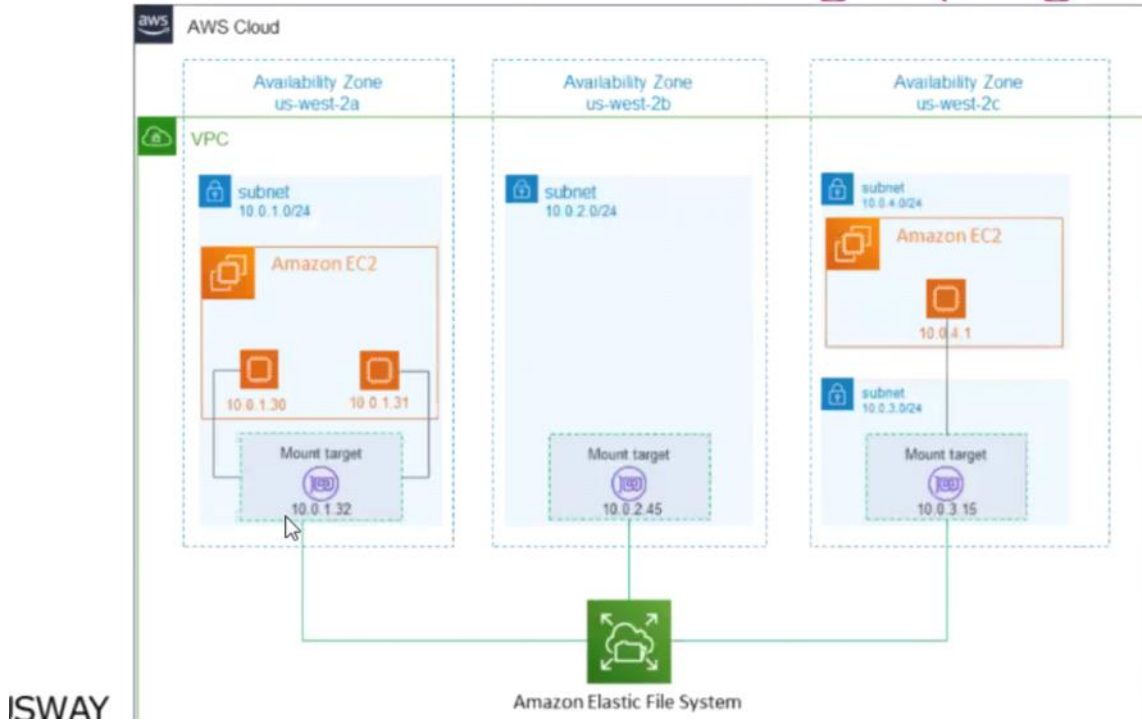
☒ Enable encryption of data at rest

▼ Customize encryption settings

KMS key  
Choose or input a KMS key ID or ARN to use instead of the AWS KMS service key. [Learn more](#)

Next

## EFS Structure : Mount Target (Regional)



Amazonun verdigi sec grouplari kullanmak istemiyoruz ve defaultlari silelim.

### Network access

#### Network

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

vpc-282cb155  
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-5f652...	Automatic	Choose securit... sg-f114b1e8 default	Remove
us-east-1b	subnet-46521...	Automatic	Choose securit... sg-f114b1e8 default	Remove
us-east-1c	subnet-06eda...	Automatic	Choose securit... sg-f114b1e8 default	Remove
us-east-1d	subnet-222d3...	Automatic	Choose securit... sg-f114b1e8 default	Remove
us-east-1e	subnet-fb69fca	Automatic	Choose securit... sg-f114b1e8 default	Remove
us-east-1f	subnet-e4251f...	Automatic	Choose securit... sg-f114b1e8 default	Remove

Add mount target

## Ve ilk olusturdugumuz EFS sec grouplari secelim

**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-5f652...	Automatic	<div>Choose securit...</div> <div>sg-04442e4525d d8a783 EFS SecGrp</div>	<div>Remove</div>
us-east-1b	subnet-46521...	Automatic	<div>Choose securit...</div> <div>sg-04442e4525d d8a783 EFS SecGrp</div>	<div>Remove</div>
us-east-1c	subnet-06eda...	Automatic	<div>Choose securit...</div> <div>sg-04442e4525d d8a783 EFS SecGrp</div>	<div>Remove</div>
us-east-1d	subnet-222d3...	Automatic	<div>Choose securit...</div> <div>sg-04442e4525d d8a783 EFS SecGrp</div>	<div>Remove</div>
us-east-1e	subnet-fb69fda	Automatic	<div>Choose securit...</div> <div>sg-04442e4525d d8a783 EFS SecGrp</div>	<div>Remove</div>
us-east-1f	subnet-e4251f...	Automatic	<div>Choose securit...</div> <div>sg-04442e4525d d8a783 EFS SecGrp</div>	<div>Remove</div>

Next

**File system policy** : erisim yetkilerini set edebiliriz / IAM servisi ile iliskili

**File system policy - optional**

**Policy options**

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

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

\* Identity-based policies can override these default permissions.

► Grant additional permissions

**Policy editor (JSON)**

Clear

1

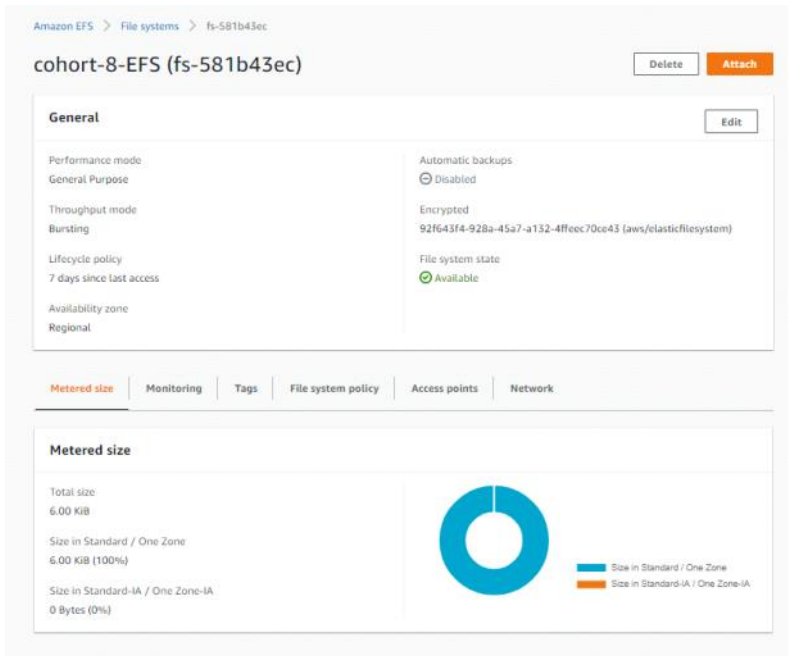
Manual changes will prevent the use of the policy options on the left until the editor is cleared.

Cancel Previous Next

Next

Create

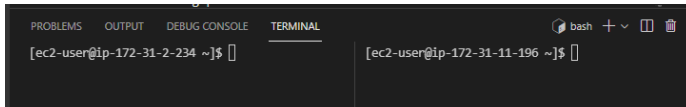
GORSEL :



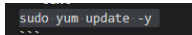
## Part 3 - Attach the EFS to the multiple EC2 Linux 2 instances

### STEP-1: Configure the EC2-1 instance

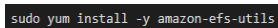
VS cod vasitasiyla EC2 lara baglanalim (EFS sadece Linux tabanlı OS leri destekliyor)



Her iki ec2 ya da update edelim



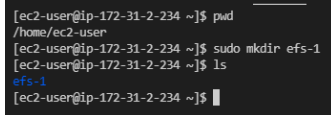
Install the "Amazon-efs-utils Package" on Amazon Linux (her iki instanceye)



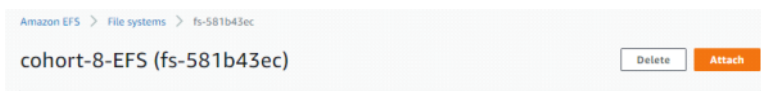
Create Mounting point;

Nereye mount edeceğimizin önemi yok ve klasör oluşturmamız gerekiyor

Aşağıdaki görseli ilk ec2 ya uyguluyoruz

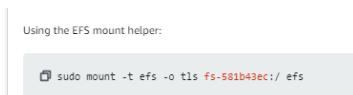


Attach işlemini konsol üzerinden yapıyoruz



Gorseldeki komutu kopyalayalım ilk ec2 ya yapistiralim

(dosya ismine dikkat edelim)





```
[ec2-user@ip-172-31-2-234 ~]$ sudo mount -t efs  
-o tls fs-581b43ec:/ efs-1
```

Vs coddan efs-1 icerisine girelim bir dosya olusturalim ve kaydedelim

```
[ec2-user@ip-172-31-2-234 efs-1]$ cat test.txt  
hello from first ec2  
[ec2-user@ip-172-31-2-234 efs-1]$
```

Diger EC2 da klasor olusturalim, klasor isminin bir onemi yok

```
[ec2-user@ip-172-31-11-196 ~]$  
[ec2-user@ip-172-31-11-196 ~]$ sudo mkdir efs-2  
[ec2-user@ip-172-31-11-196 ~]$ ls  
efs-2
```

Attach islemini tekrar edelim.

```
[ec2-user@ip-172-31-11-196 ~]$ sudo mount -t ef  
s -o tls fs-581b43ec:/ efs-2  
[ec2-user@ip-172-31-11-196 ~]$
```

Ls komutu ile ilk ec2 da olusturdugumuz dosyayi ikinci ec2 da gormus olduk

```
[ec2-user@ip-172-31-11-196 efs-2]$ ls  
test.txt  
[ec2-user@ip-172-31-11-196 efs-2]$  
[ec2-user@ip-172-31-11-196 efs-2]$ cat test.txt  
hello from first ec2
```

2. EC2 ta ayni dosya uzerinde yapacagimiz degisikligi de ilk dosyada gorebiliriz. Bu islem tam ters olarak da gerceklesebilir

EC2 konsolundan yeni instance olusturalim

Acik iki EC2 nun AZ sini kontrol edelim

Availability Zone

us-east-1b
us-east-1b

Yeni olusturacagimiz ec2 ya sayfasina gidelim

Farkli AZ secelim

Subnet ⓘ  Create new subnet  
4090 IP Addresses available

File systems ⓘ

File systems ⓘ

**Additional security groups required**

To enable access to the file system, the required security groups will be automatically created and attached to this instance and the selected file system's mount targets. To manually manage the security groups, clear the check box. [Learn more](#)

☐ Automatically create and attach the required security groups.

Specify Amazon EFS file systems to mount to your instance. To enable traffic between the instance and the file systems, the file systems must have a security group that allows inbound access for the TCP protocol on the NFS port from the instance, and the instance must have a security group that allows outbound access to the mount targets on the NFS port

Bu islem sonrasinda user data gorunmektedir

Key (128 characters maximum) Value (256 characters maximum) Inst

Name EC2-3

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, you can allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select an existing security group.

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

Security Group ID	Name	Description
sg-f114b1e8	default	default VPC security group
sg-007ed4b#3b4ea598	EC2 SecGrp	EC2 SecGrp

EC2-3 nolu EC2 ya VS cod dan baglanalim

```
[ec2-user@ip-172-31-65-146 ~]$
```

update islemi yapalim  
Makinayi kurarken mounting islemlerini yapmis olduk ve file sistemine erismeyi bekliyoruz.

```
[ec2-user@ip-172-31-65-146 ~]$ cd /mnt/efs/fs1
[ec2-user@ip-172-31-65-146 fs1]$ ls
test2.txt test.txt
[ec2-user@ip-172-31-65-146 fs1]$ cat test2.txt
merhaba
```

Igili klasore gittigimizde ondeki dosyalari gorebiliriz

Dosya olusturalim ve ilk iki makinada kontrol edelim

```
[ec2-user@ip-172-31-65-146 fs1]$ cat test3.txt
bu 3. makinadan yazilan yazidir
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
[ec2-user@ip-172-31-2-234 efs-1]$ cat test3.txt
bu 3. makinadan yazilan yazidir
[ec2-user@ip-172-31-2-234 efs-1]$
[ec2-user@ip-172-31-11-196 efs-2]$ cat test3.tx
t
bu 3. makinadan yazilan yazidir
[ec2-user@ip-172-31-11-196 efs-2]$
```

EC2-1 makinasi reboot ettigimizde klasoru gorecegiz ama daha ondeki icerikleri goremeyecegiz, bu sebeple tekrar mount etmek gerekmektedir.

```
[ec2-user@ip-172-31-2-234 ~]$ sudo mount -t efs -o tls fs-581b43ec:/ efs-1
[ec2-user@ip-172-31-2-234 ~]$ ls
efs-1
[ec2-user@ip-172-31-2-234 ~]$ cd efs-1/
[ec2-user@ip-172-31-2-234 efs-1]$ ls
test2.txt test3.txt test.txt
```

Yukarida gorundugu uzere mount islemini tekrar edince dosyalara ulasabiliyoruz

Fakat EC2-3. makinayi reboot ettigimizde dosyalari gorebilecegiz

```
hamid@LAPTOP-U8P8S04G MINGW64 ~/ssh
$ ssh -i "EC2_key.pem" ec2-user@ec2-3-238-104-50.compute-1.amazonaws.com
Last login: Mon Aug 16 19:27:22 2021 from 176-93-241-52.bb.dnainternet.fi

 _ _ _ _ _
| | | | |
|_|_|_|_|_| Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
4 package(s) needed for security, out of 16 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-65-146 ~]$ ls
[ec2-user@ip-172-31-65-146 ~]$ cd /mnt/efs/fs1
[ec2-user@ip-172-31-65-146 fs1]$ ls
test2.txt test3.txt test.txt
[ec2-user@ip-172-31-65-146 fs1]$
```

EC2 lari terminate edelim ve olusturdugumuz EFS yi silelim