



# AWS EFS



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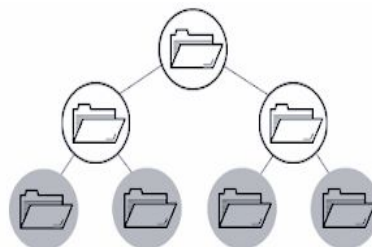
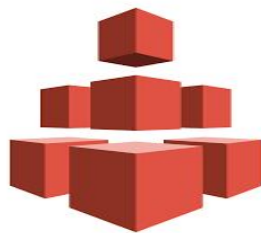
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# Introduction to EFS

CLARUSWAY  
WAY TO REINVENT YOURSELF

## Introduction to EFS

What is EFS?



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

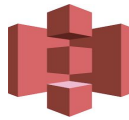
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# Introduction to EFS

## Recap of the Storage Options



Amazon EFS



S3



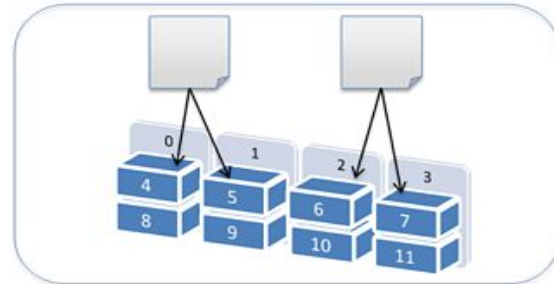
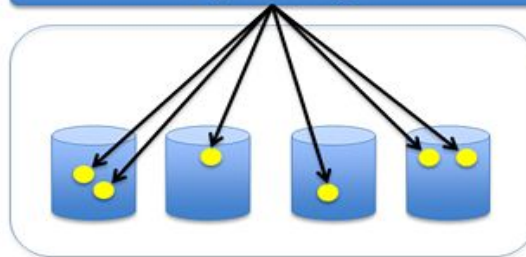
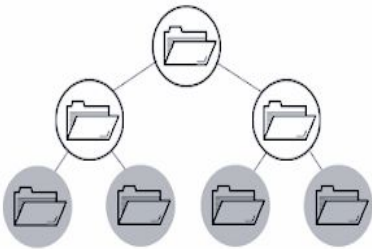
Amazon Elastic Block Storage (EBS)

File Storage

HTTP(S) Interface

Object Storage

Block Storage



## 2 Features of EFS

# Features of EFS

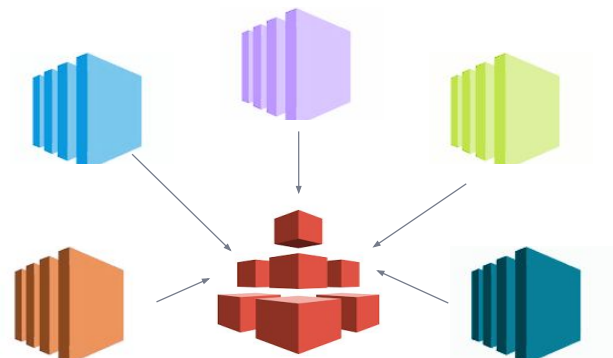
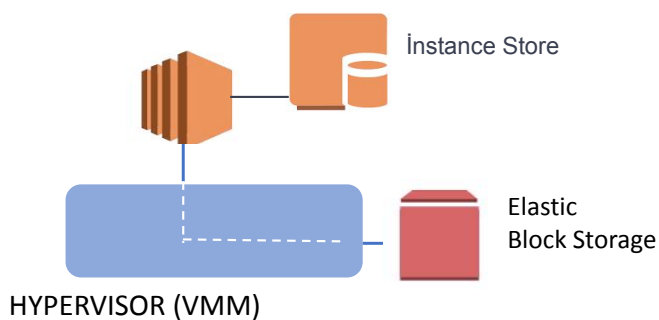
## Scalability-Cost



- 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.

# Features of EFS

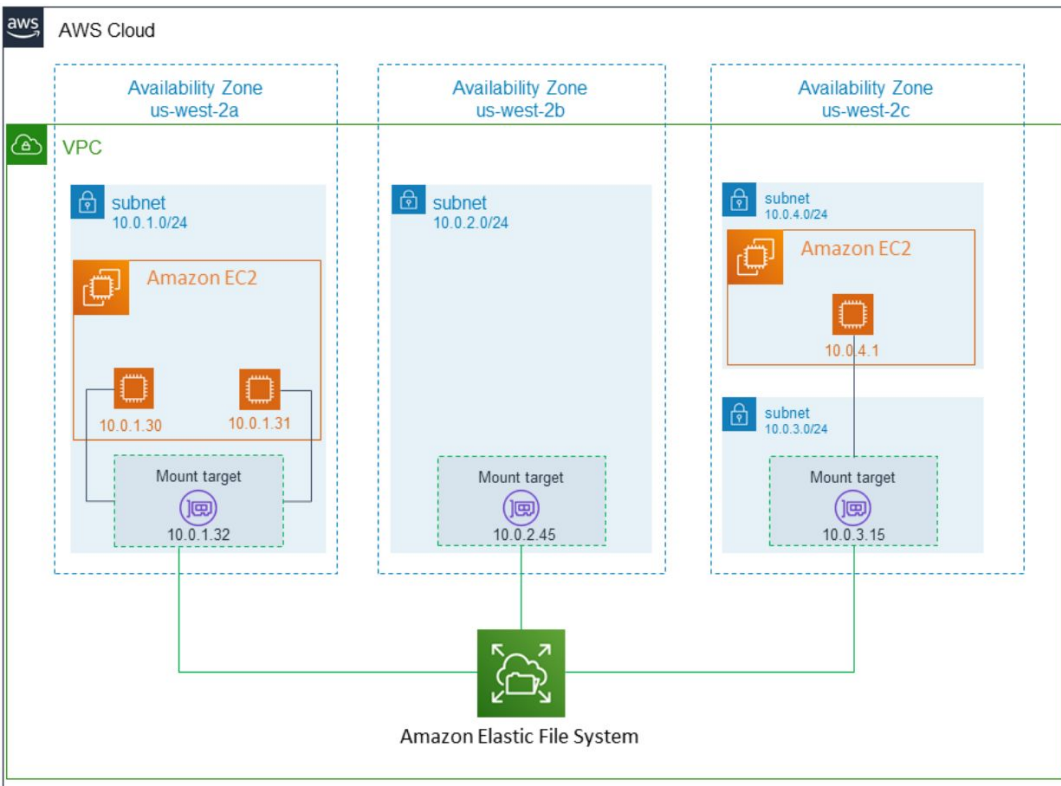
## Attaching



- 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.

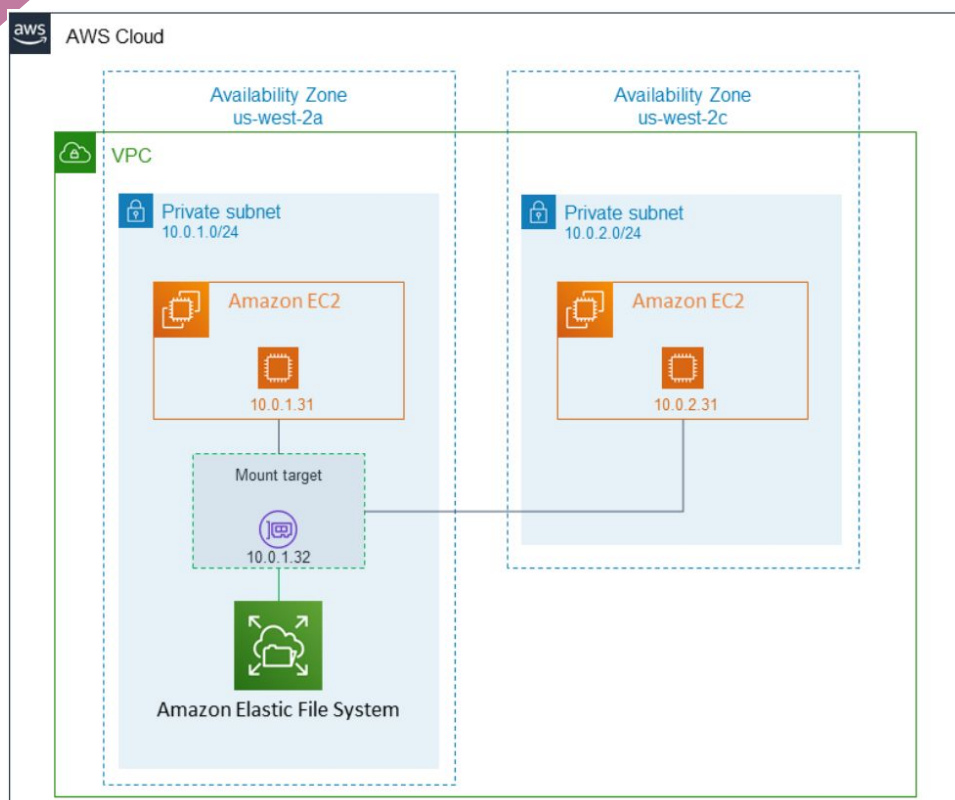
## EFS Structure : Mount Target (for Regional Storage Class)



- Mount Target is a **AZ based** component.
- You can create **only one Mount Target** in a **AZ**
- It will be located **only in one subnet** of the relevant AZ.

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## EFS Structure : Mount Target (for One-Zone Storage Class)

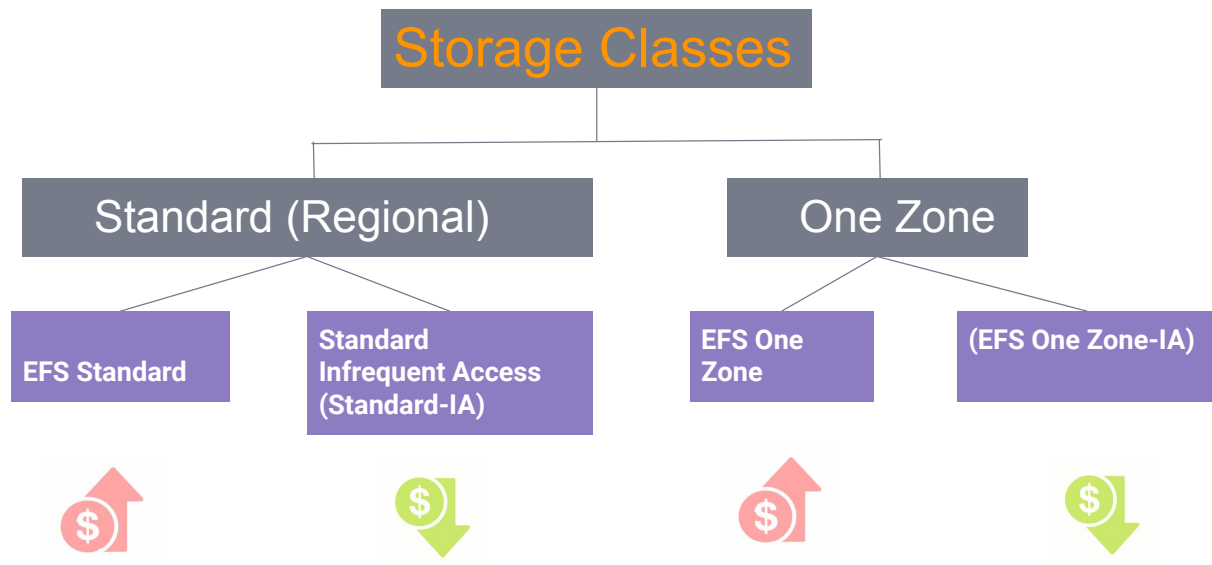


- Mount Target is created **only in one subnet** in relevant AZ.
- **Other AZs** also **uses** this Mount Target to communicate with EFS

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# Features of EFS

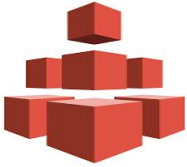
## Storage Classes



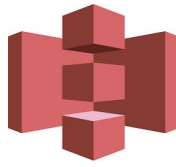
## 3 Comparison of Storage System



# Comparison of Storage Systems



Amazon EFS



S3

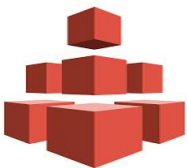


EBS

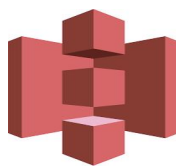
- Cost Optimized : S3 > EBS > EFS
- Speed : EBS , EFS > S3
- EC2 mount : S3 : No  
EBS : Single\*  
EFS : Multiple
- Storage Capacity : S3, EFS =  $\infty$  vs. EBS = 16 TB



# Comparison of Storage Systems



Amazon EFS



S3



EBS

- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li>- Large quantities of data,</li> <li>- Large analytic workloads.</li> <li>- Global content management</li> </ul> | <ul style="list-style-type: none"> <li>- Website images and videos,</li> <li>- Data analytics of mobile/web applications.</li> <li>- Data which is needed to be accessed from anywhere.</li> </ul> | <ul style="list-style-type: none"> <li>- High IOPS required data ,</li> <li>- Database management.</li> </ul> |
|---|--|---|

# Comparison of Storage Systems

		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

# THANKS!

## Any questions?

