DATE : 28.01.2025

DT/NT : NT

LESSON : AWS

SUBJECT: EFS

BATCH : B 303

AWS-DEVOPS

TECHPRO EDUCATION

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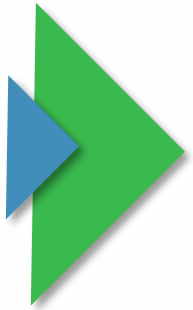
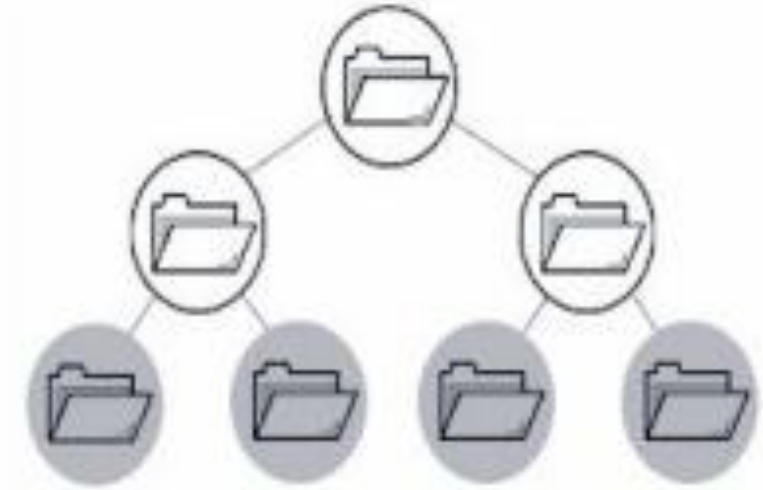


Introduction to EFS

Introduction to EFS

What is EFS?

EFS provides simple, scalable, and elastic file storage for use with AWS Cloud services and on-premises resources.



Introduction to EFS

What is EFS?

Amazon Elastic File System (EFS) is a serverless, fully elastic file storage solution designed to help you share file data without the need to provision or manage storage capacity and performance.

Features of EFS

Features of EFS

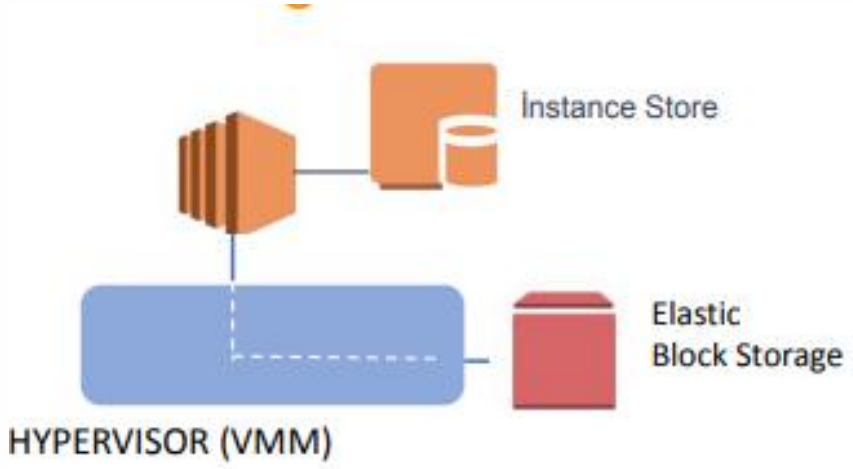
Scalability-Cost

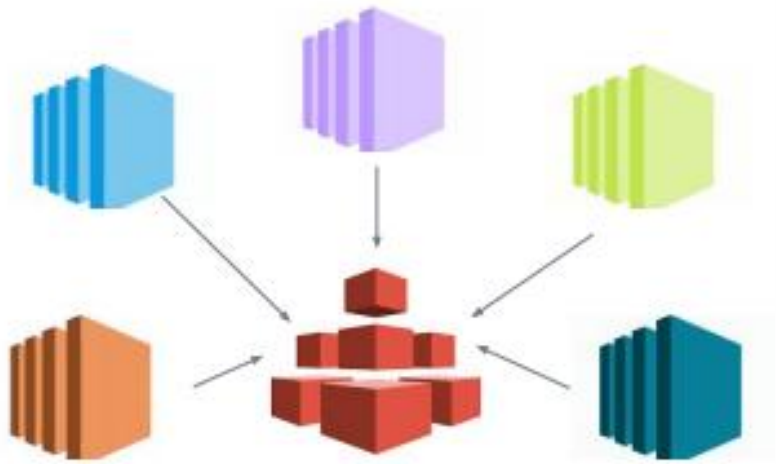
- Since EFS is scalable, it automatically increases and decreases storage capacity as you add or delete files.
- There are no minimum fees or setup costs.

Features of EFS

Attaching

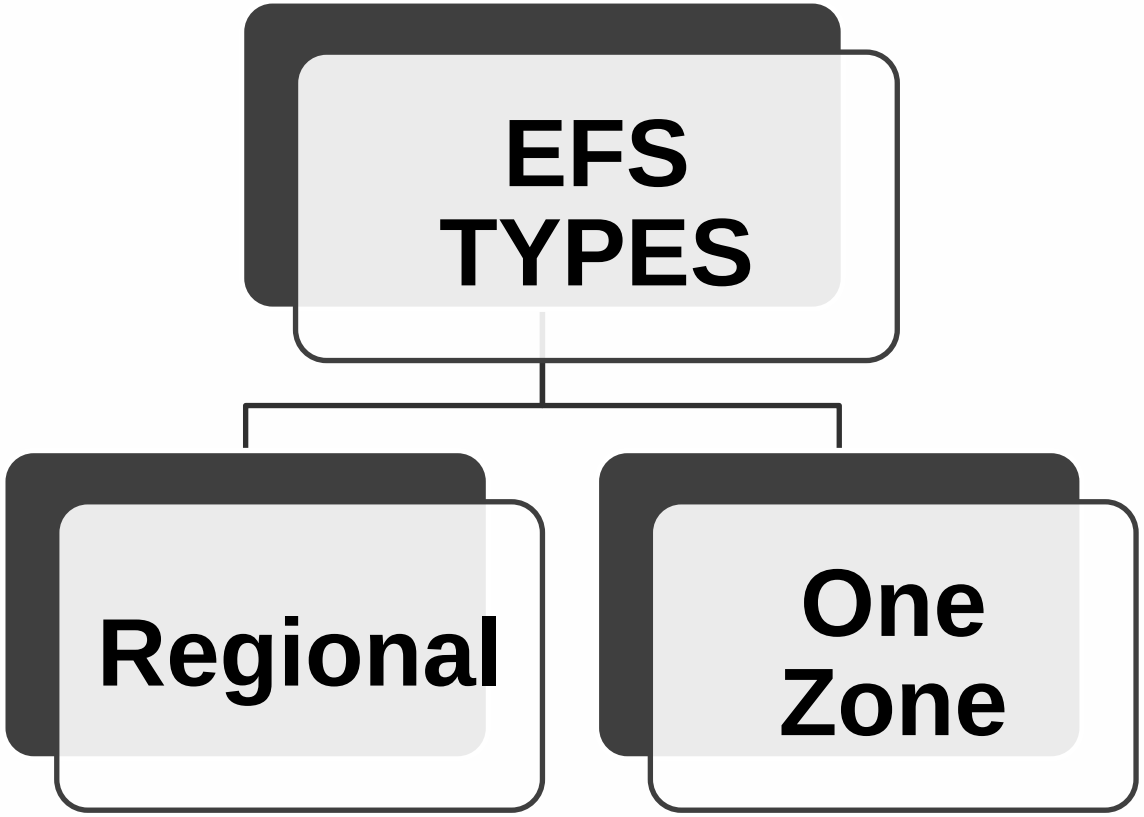
- Unlike EBS, multiple Amazon EC2 instances (Linux only) can simultaneously access an Amazon EFS file system, even across different Availability Zones (AZs).



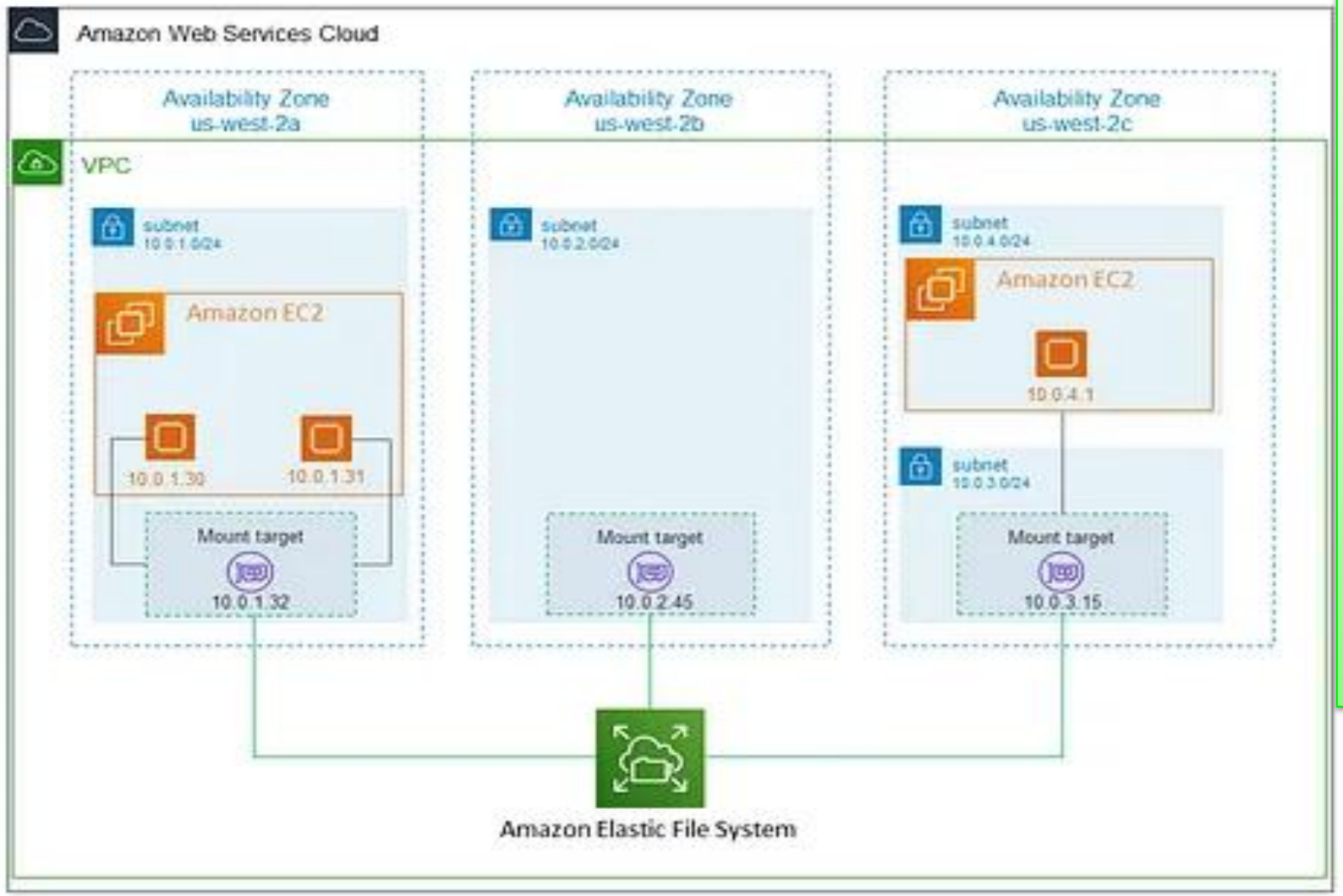


Features of EFS

EFS file system types

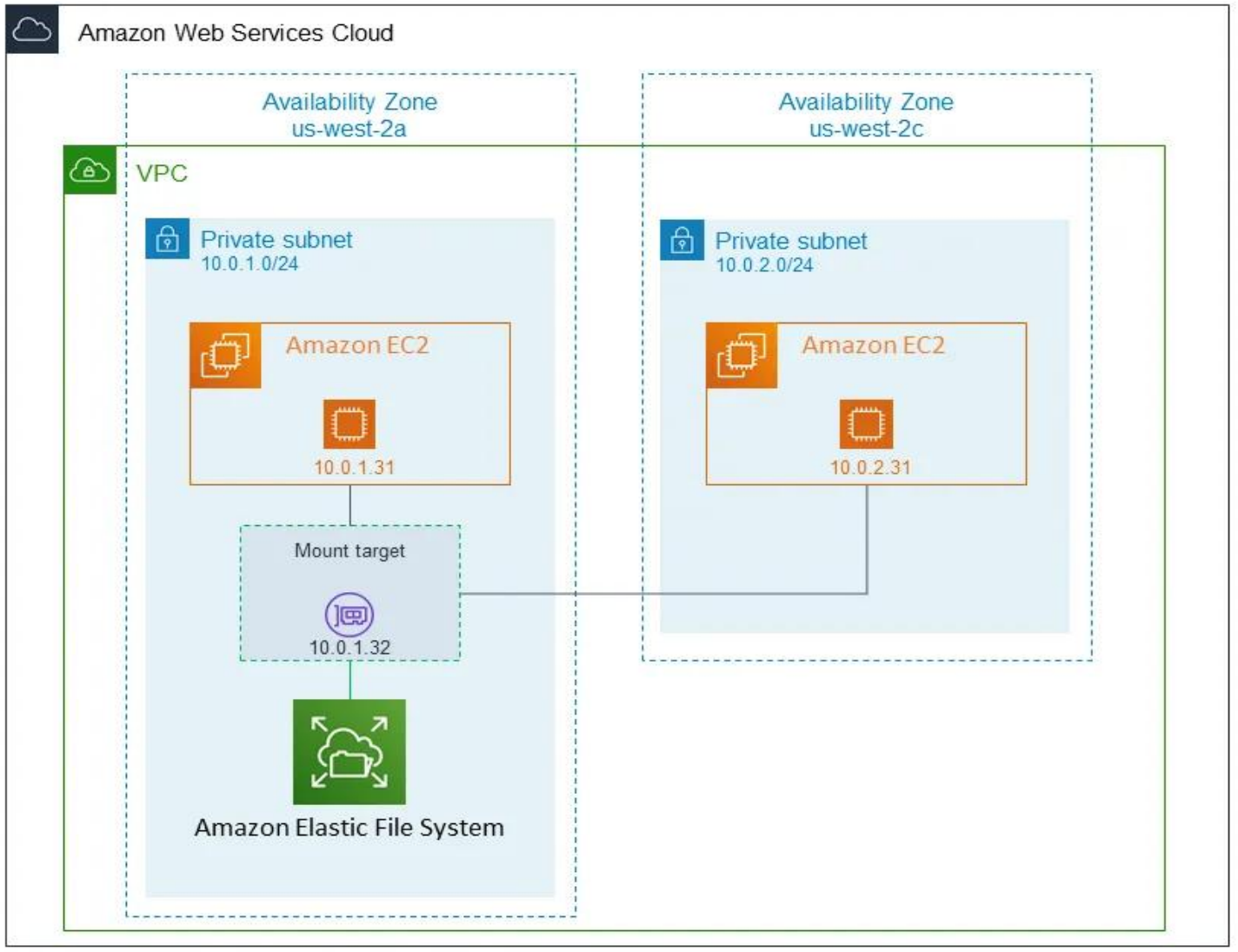


EFS Structure : Mount Target (for Regional Storage Class)



- A Mount Target is an AZ-based component.
- You can create only one Mount Target per Availability Zone (AZ).

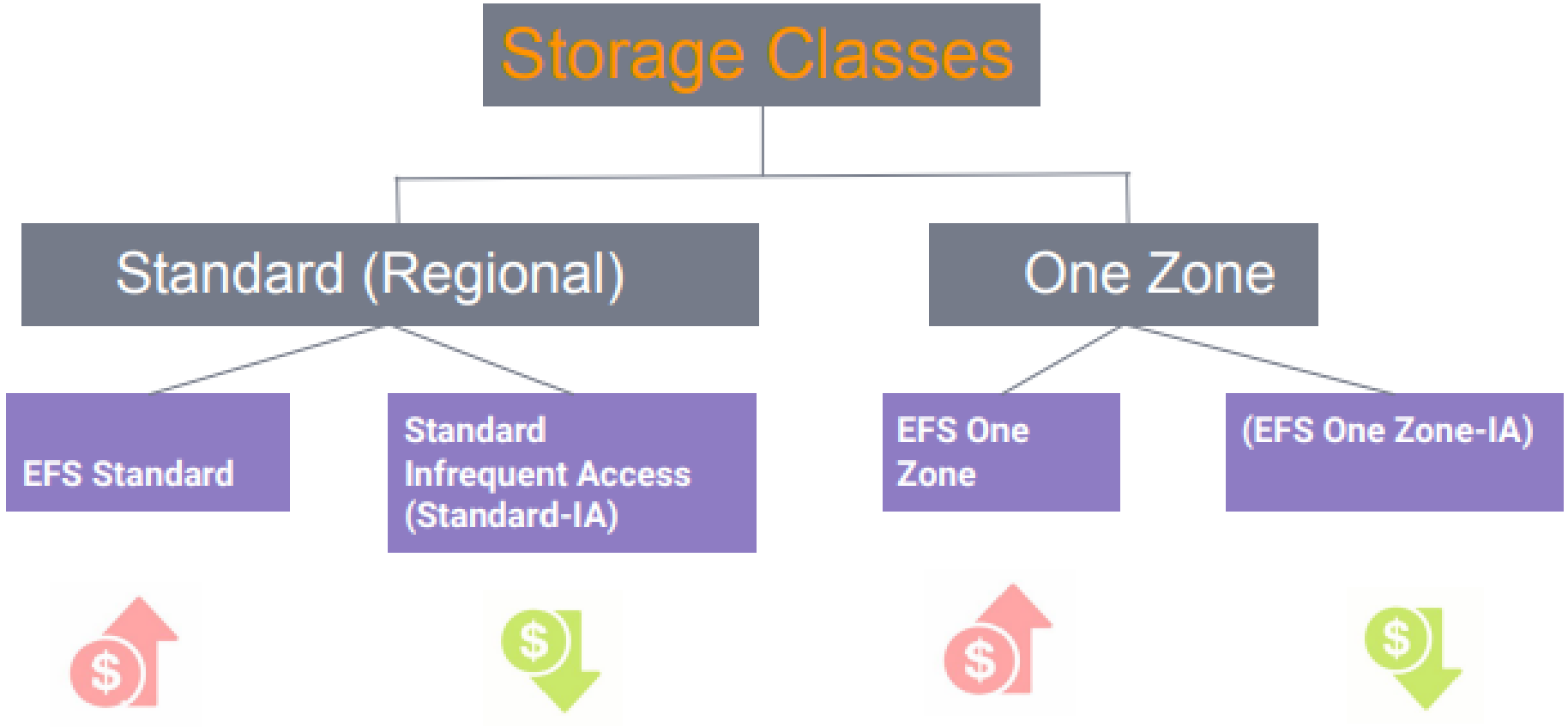
EFS Structure : Mount Target (for One-Zone Storage Class)



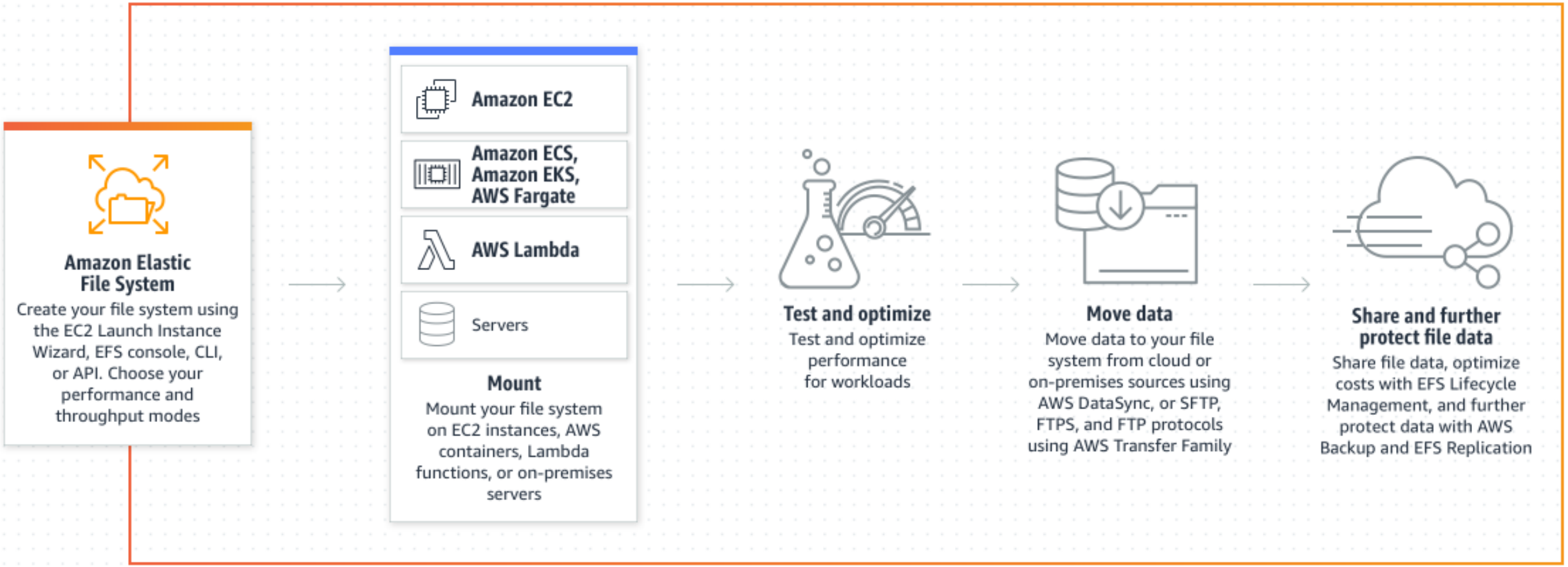
- A Mount Target is created in only one subnet within its respective AZ.
- Other AZs communicate with EFS using this Mount Target.

Features of EFS

Storage Classes



Features of EFS



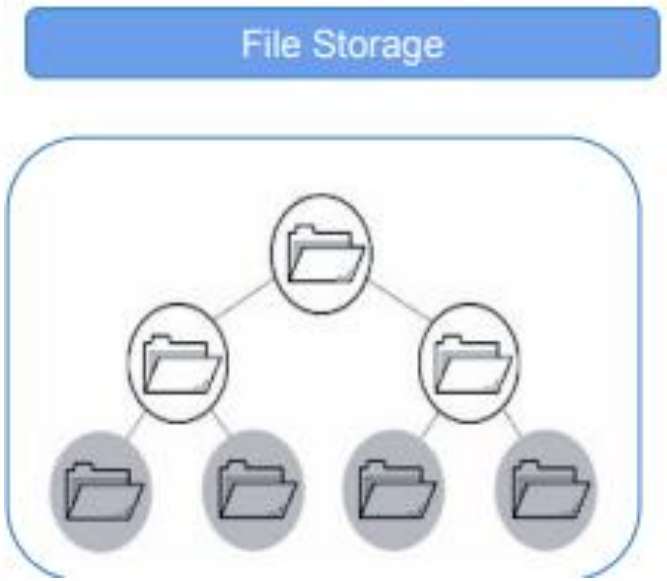
Comparison of Storage Systems

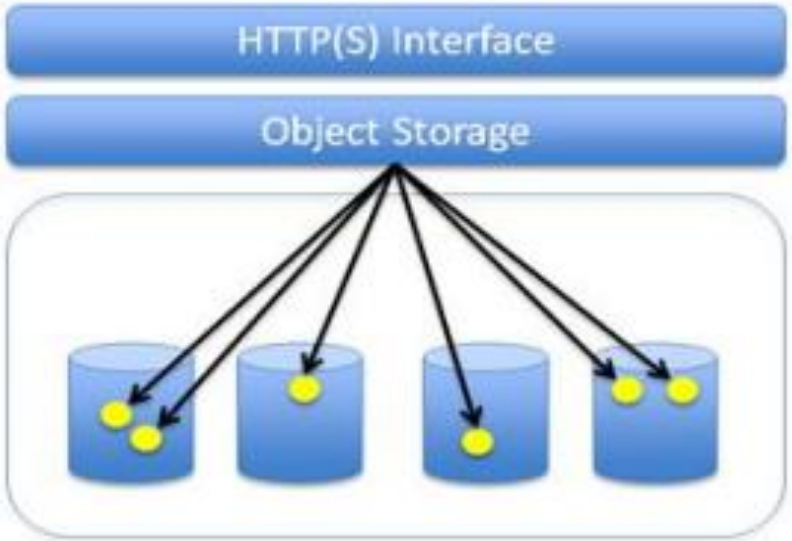
Comparison of Storage Systems

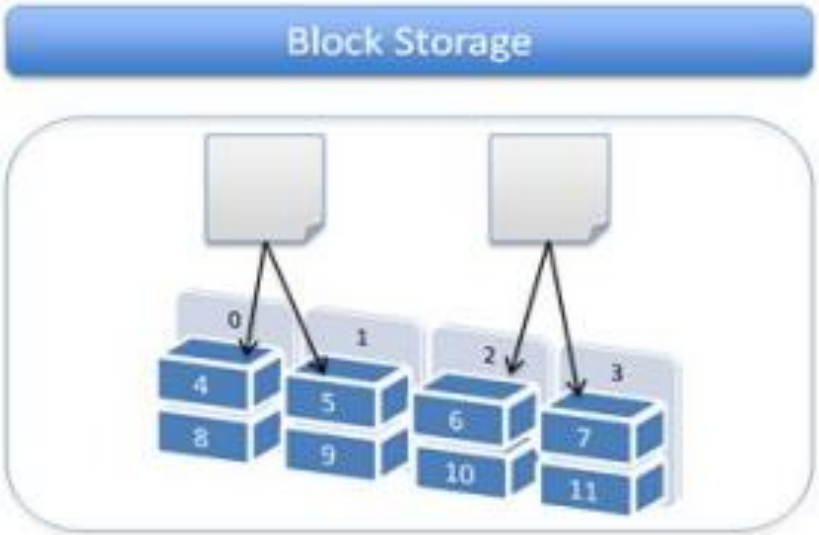
Amazon EFS

S3

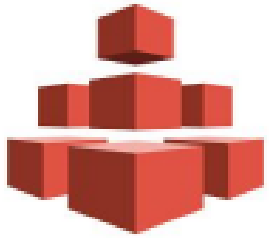
Amazon Elastic Block Storage (EBS)



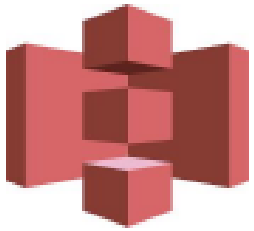




Comparison of Storage Systems



Amazon EFS

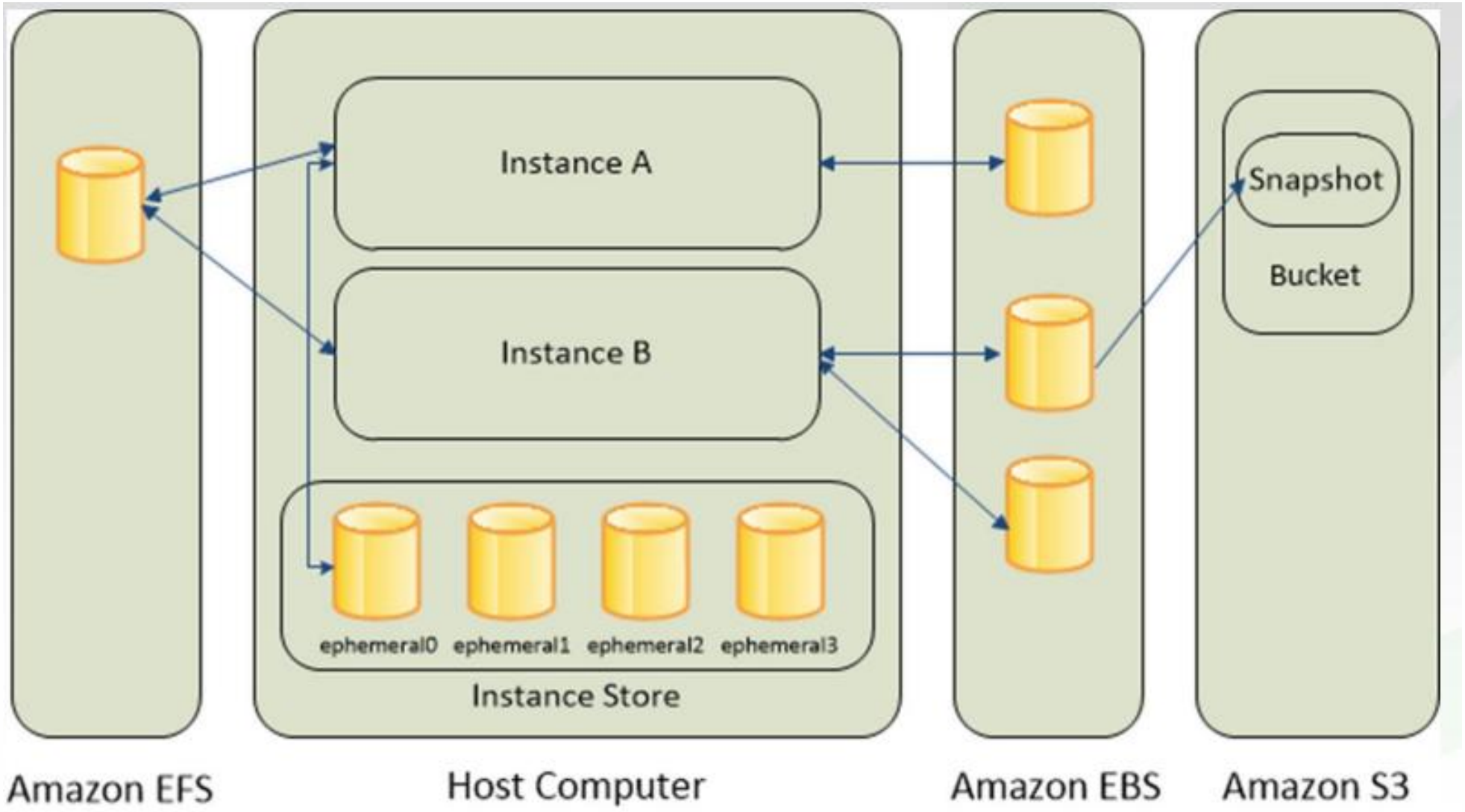


S3

EBS

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

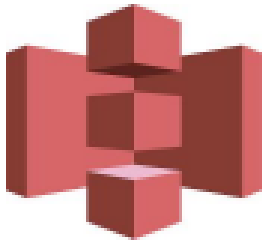
Comparison of Storage Systems



Comparison of Storage Systems

Amazon EFS

- Multi-client access
- Scalable applications
- Applications requiring high availability



S3

- Data backup and archiving
- Website assets
- Big data storage
- Application data

EBS

- Databases
- Boot volume
- Workloads requiring high performance

Comparison of Storage Systems

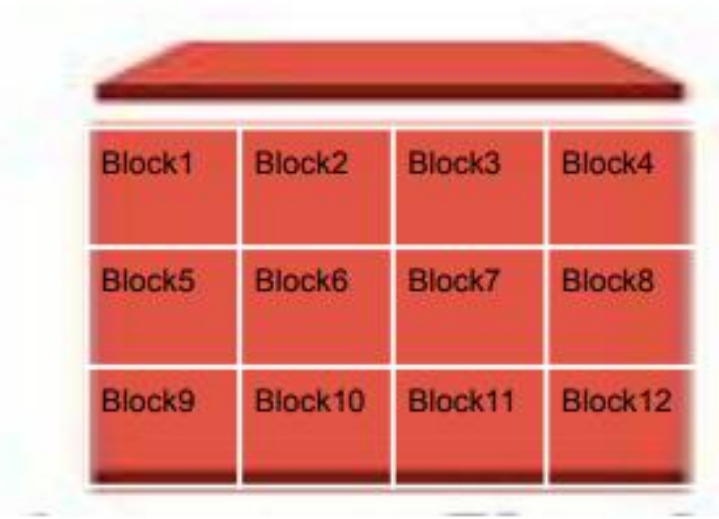
Block Based

Totally = 16KB in size

Divide your object into the blocks max 4KB inseize

Each Block=4KB in size

EBS



Each Block= 4KB in seize

Total blocks number= 12

Totally = 48KB

Who can call the data? =Only related EC2

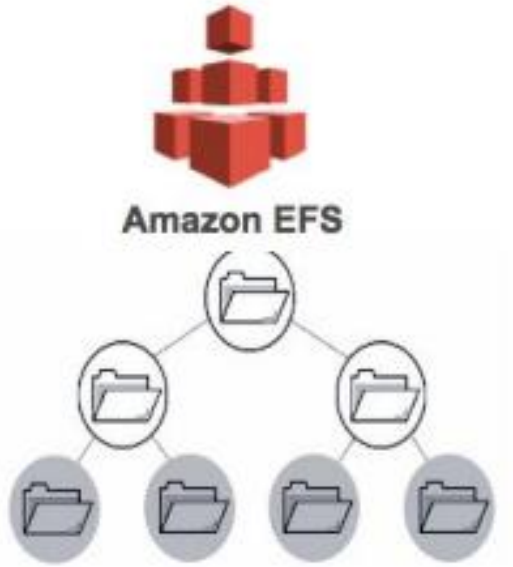
Comparison of Storage Systems

Object Based

Who can call the data? = Anybody with public **internet** and permission

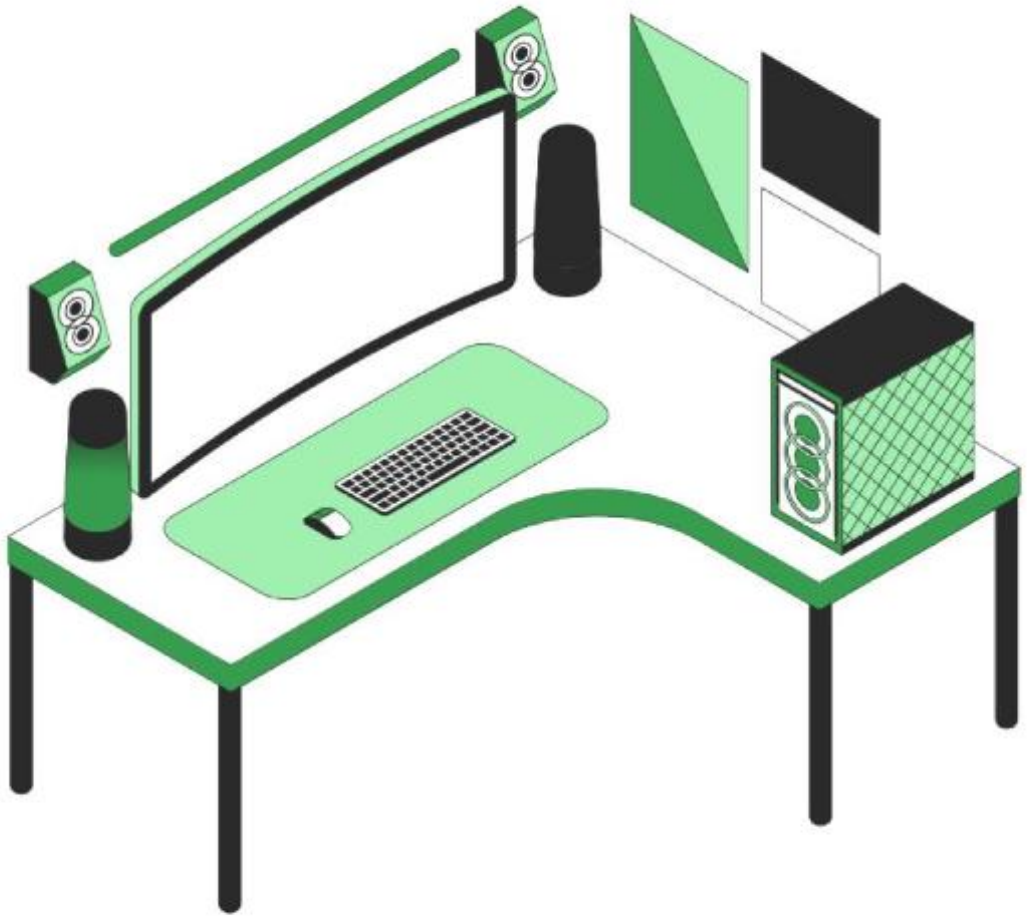
Comparison of Storage Systems

File Based



~/efs/techpro

Who can call the data? = Multiple or single EC2



Do you have any questions?

Send it to us! We hope you learned something new.