BATCH : 149

LESSON : **AWS**

DATE : 23.08.2023

SUBJECT : **AWS EFS**

techproeducation

techproeducation

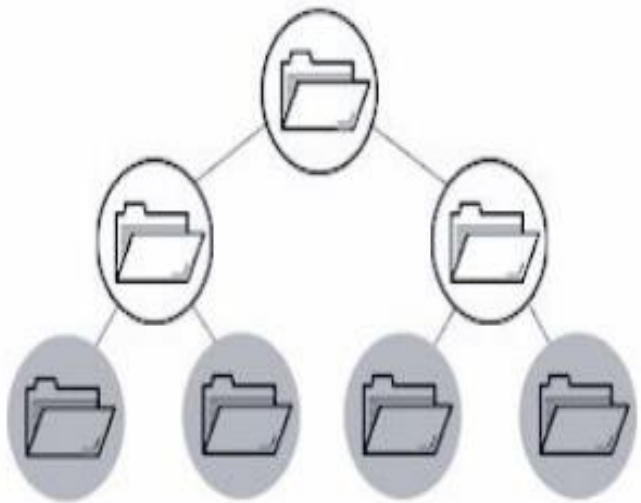
techproeducation

techproeducation

techproedu

Introduction to EFS

What is EFS?



Simple, scalable, fully managed Elastic NFS file system.

What is EFS ?

- ✓ 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.

Introduction to EFS

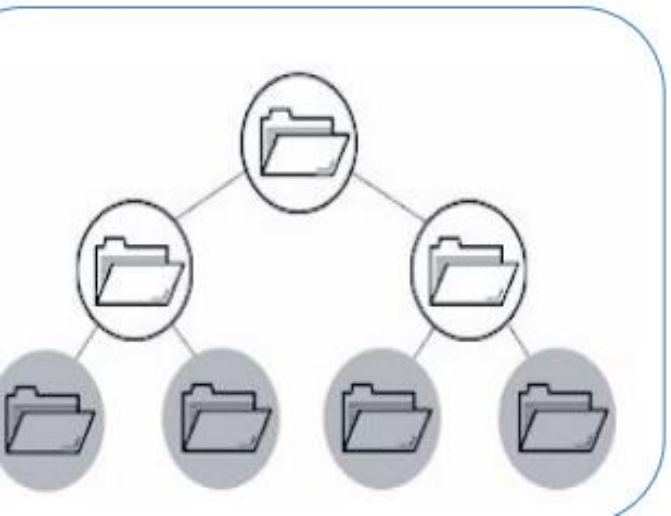
Recap of the Storage Options

Amazon EFS

S3

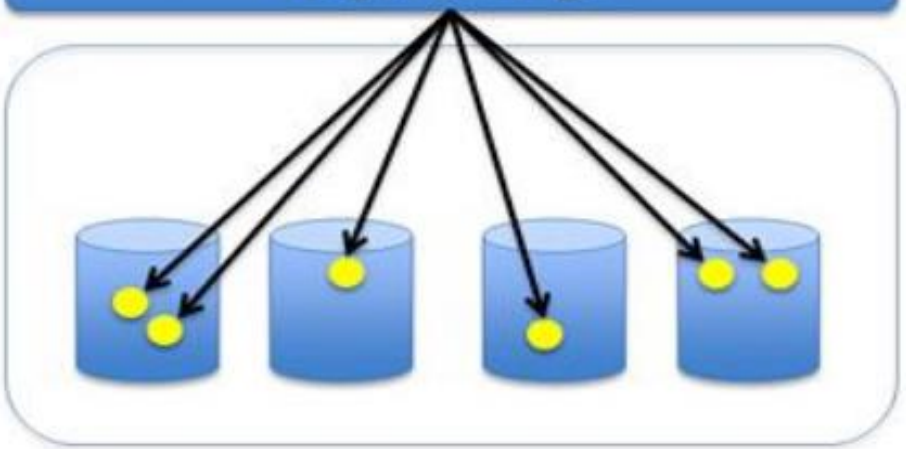
Amazon Elastic Block Storage (EBS)

File Storage

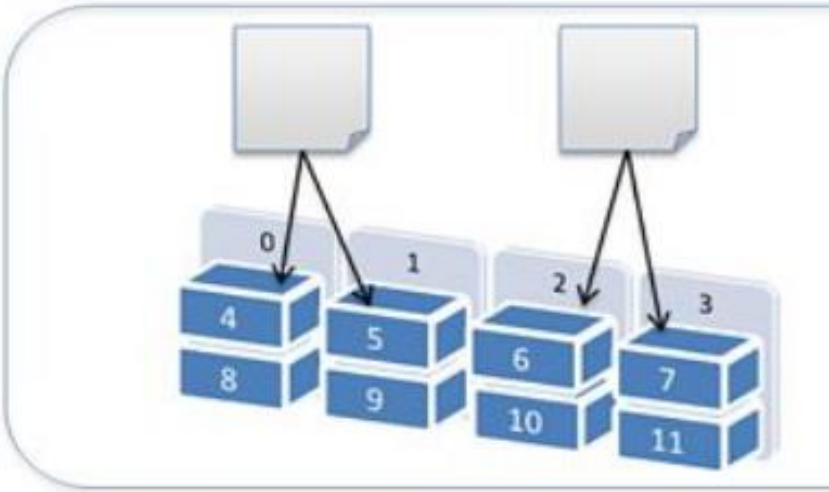


HTTP(S) Interface

Object Storage

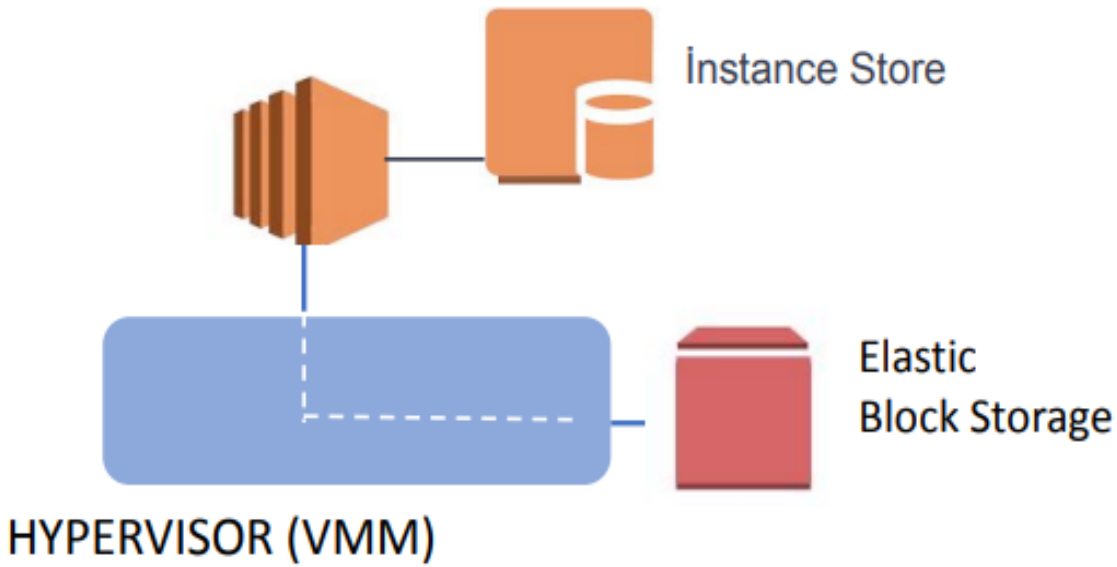


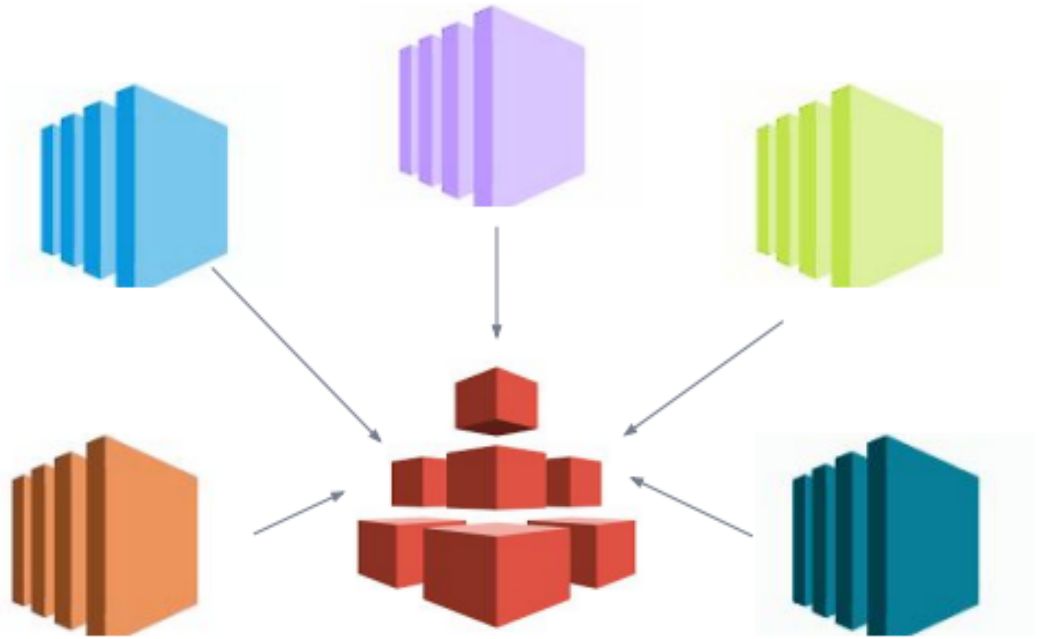
Block Storage



Features of EFS

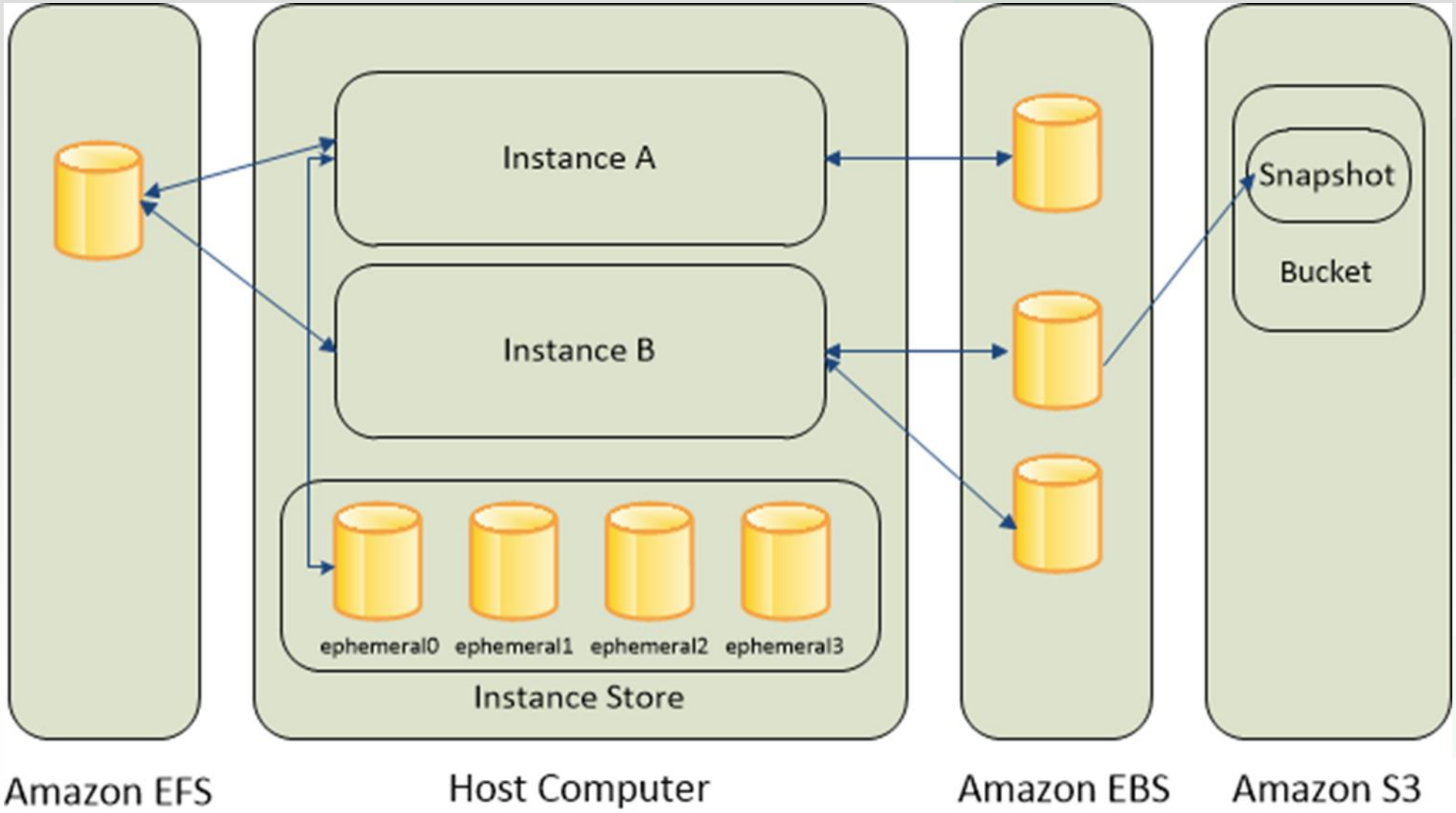
Attaching





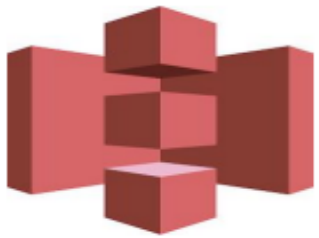
Unlike *EBS, **multiple Amazon EC2** instances (**Linux only**) even i**different AZ's** can be attached Amazon **EFS** file system **at the same time**.

Comparing EFS with EBS and S3



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

Comparing EFS with EBS and S3

		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

Features of EFS ?

- ✓ 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.

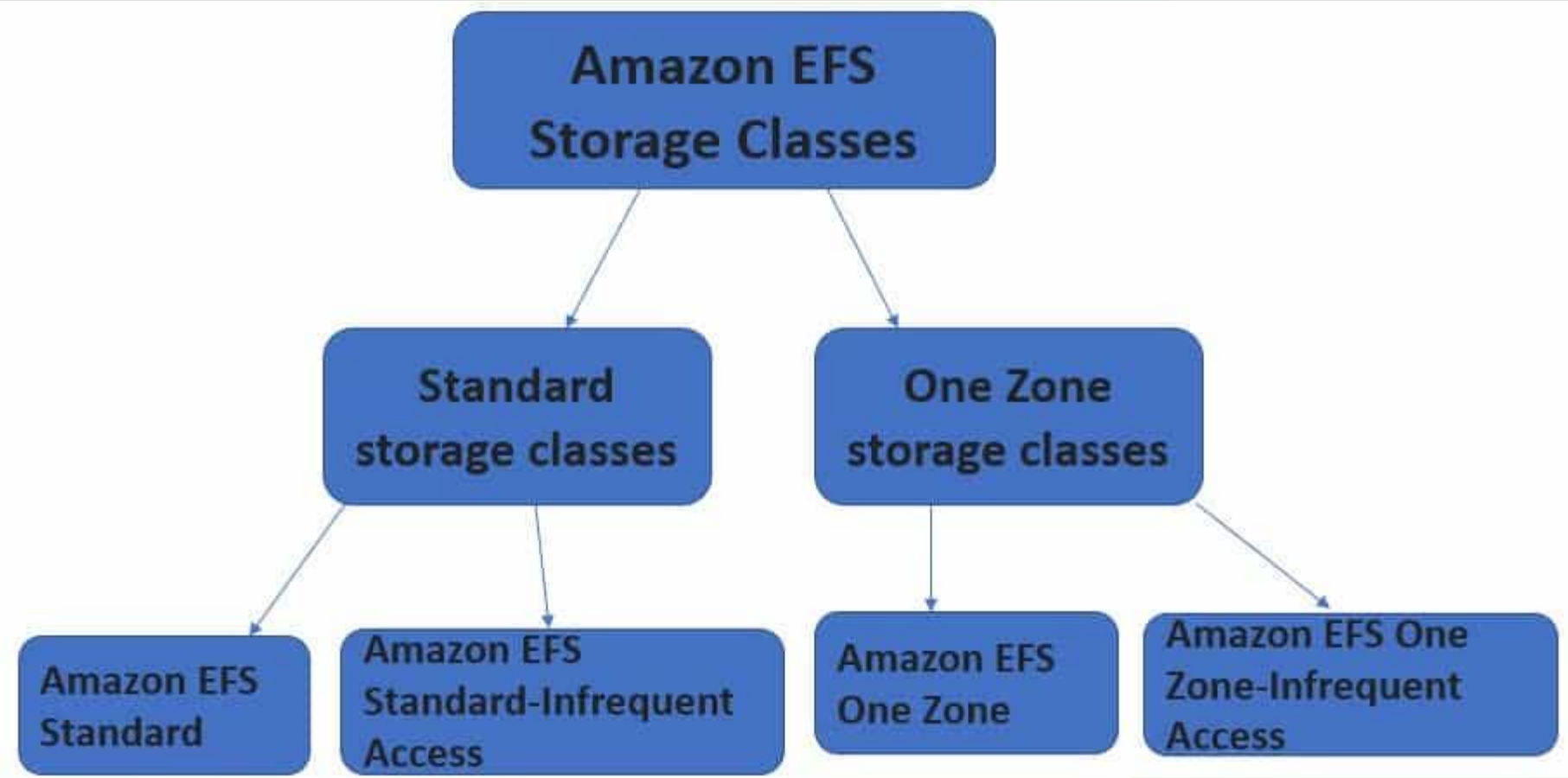
Features of EFS

Scalability-Cost

Since EFS is scalable, it increases and decreases the storage capa automatically as you add and delete files,

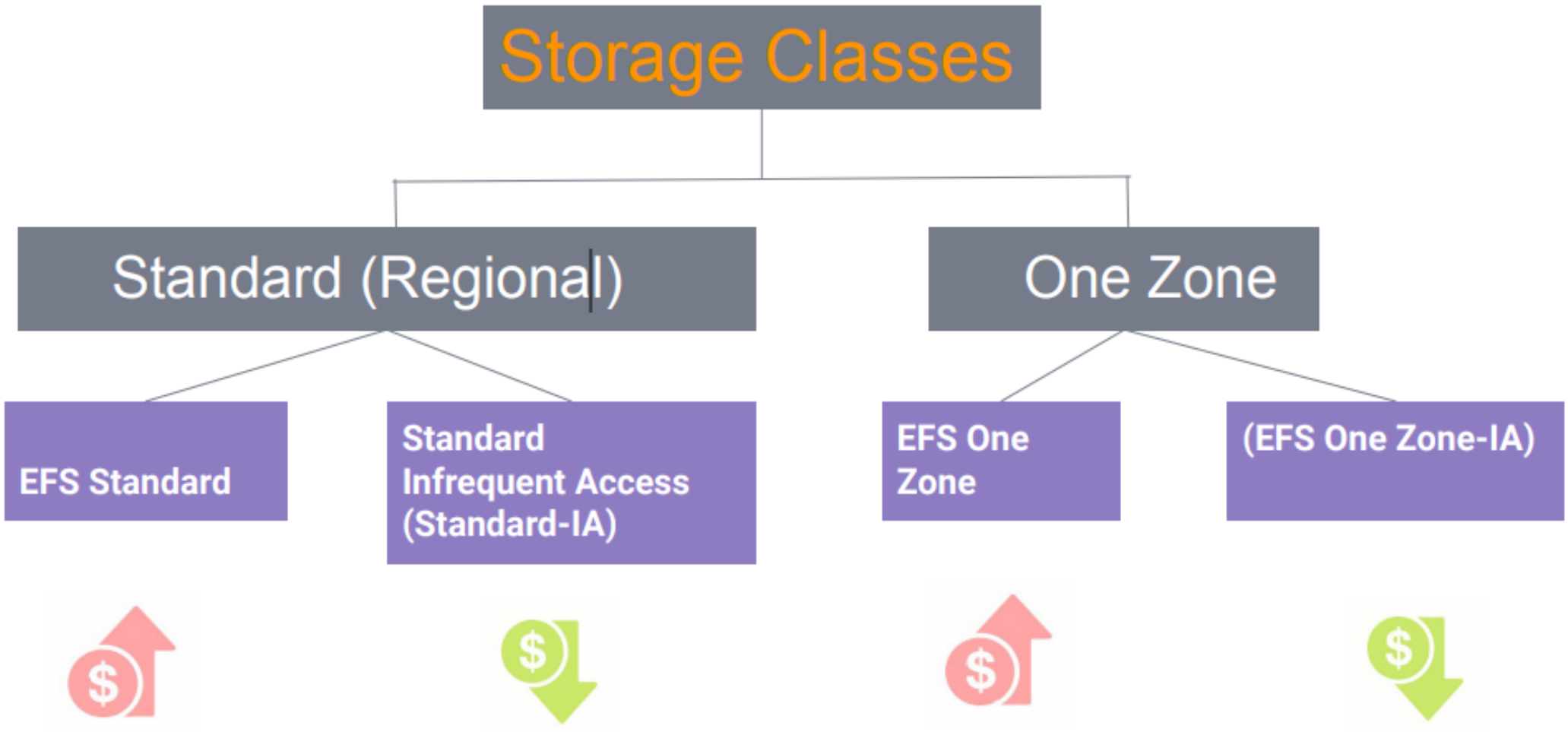
There is no minimum fee or setup cost.

EFS Storage Classes

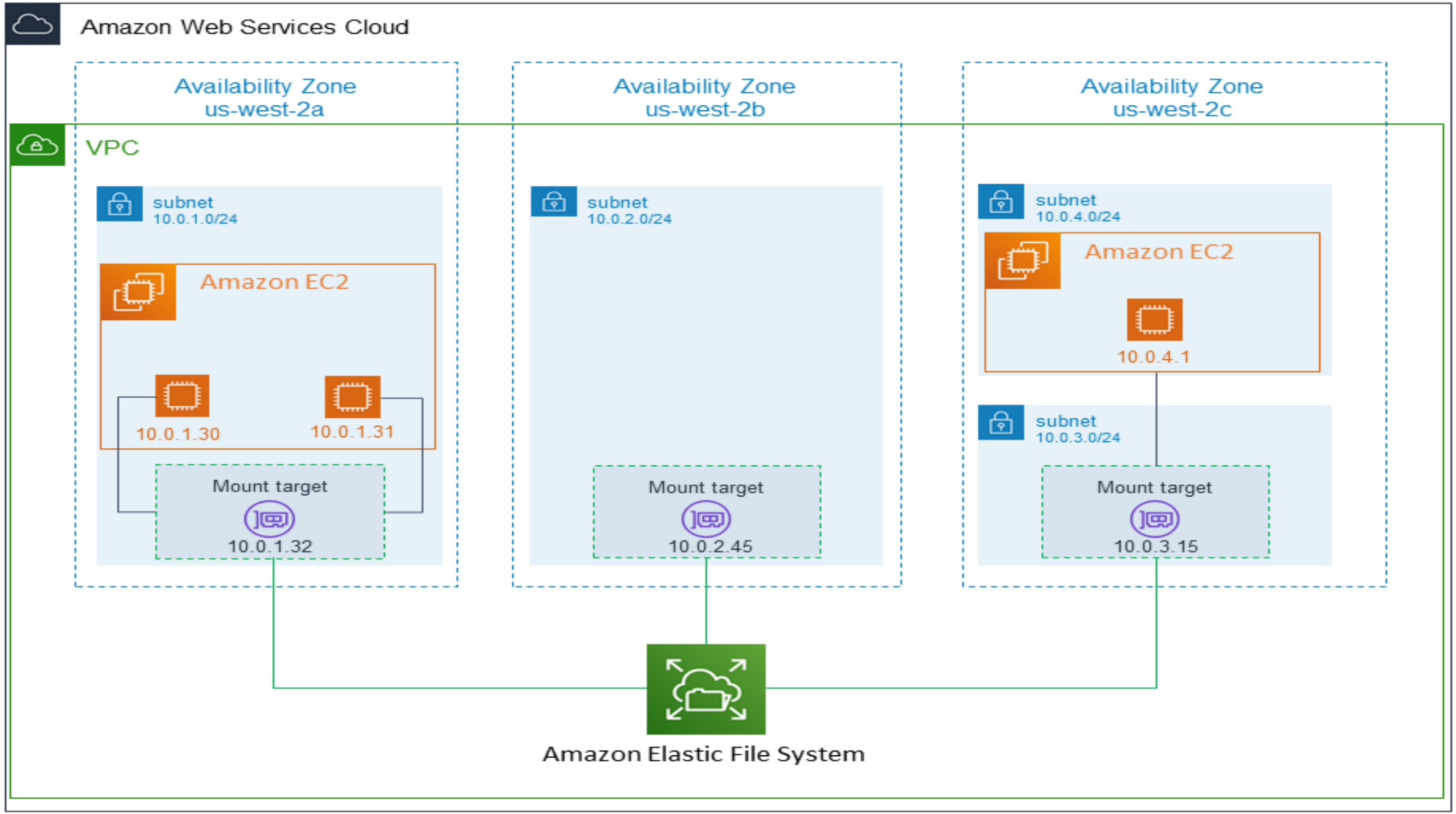


Features of EFS

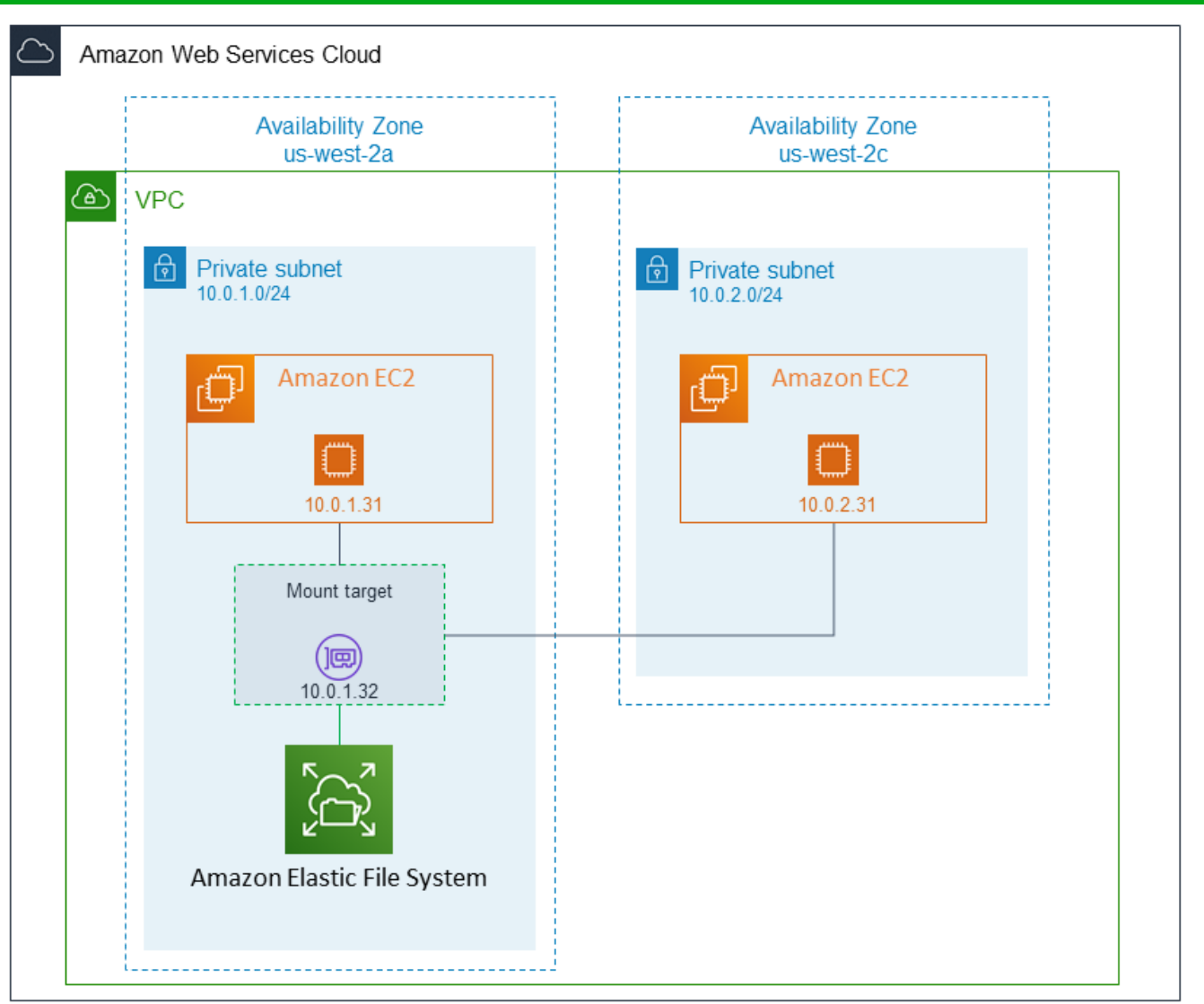
Storage Classes



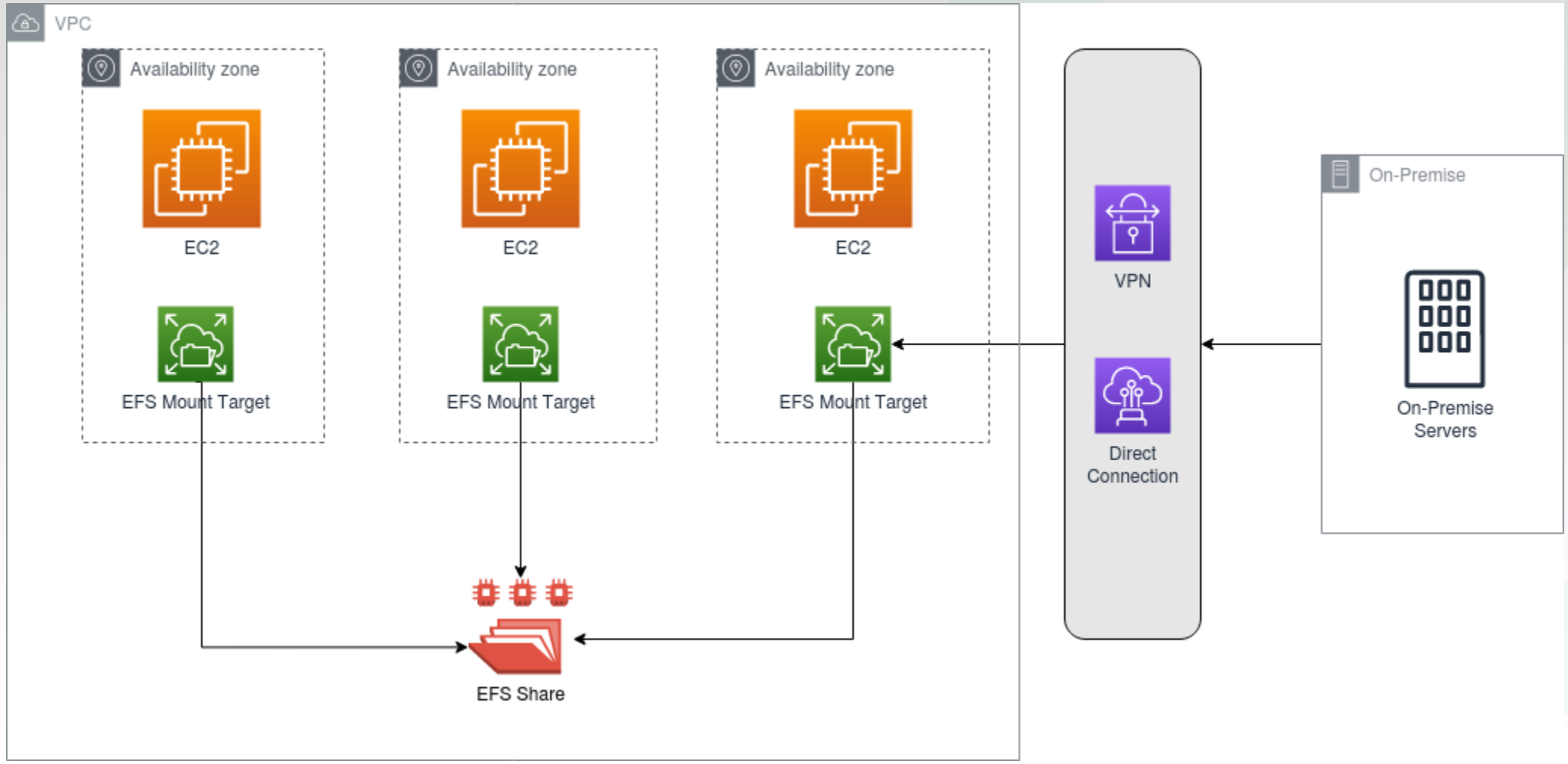
Amazon EFS with Standard storage classes

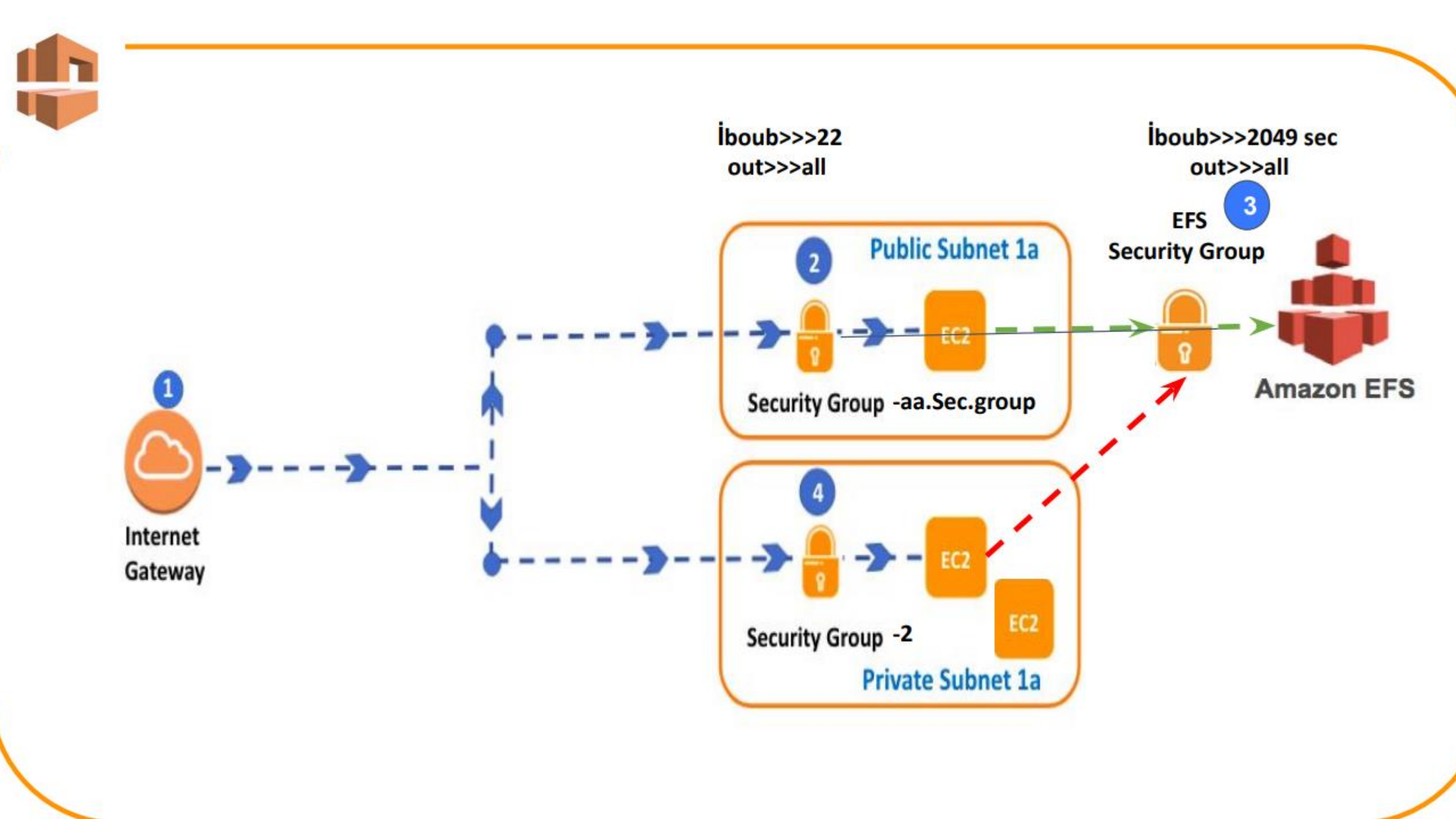


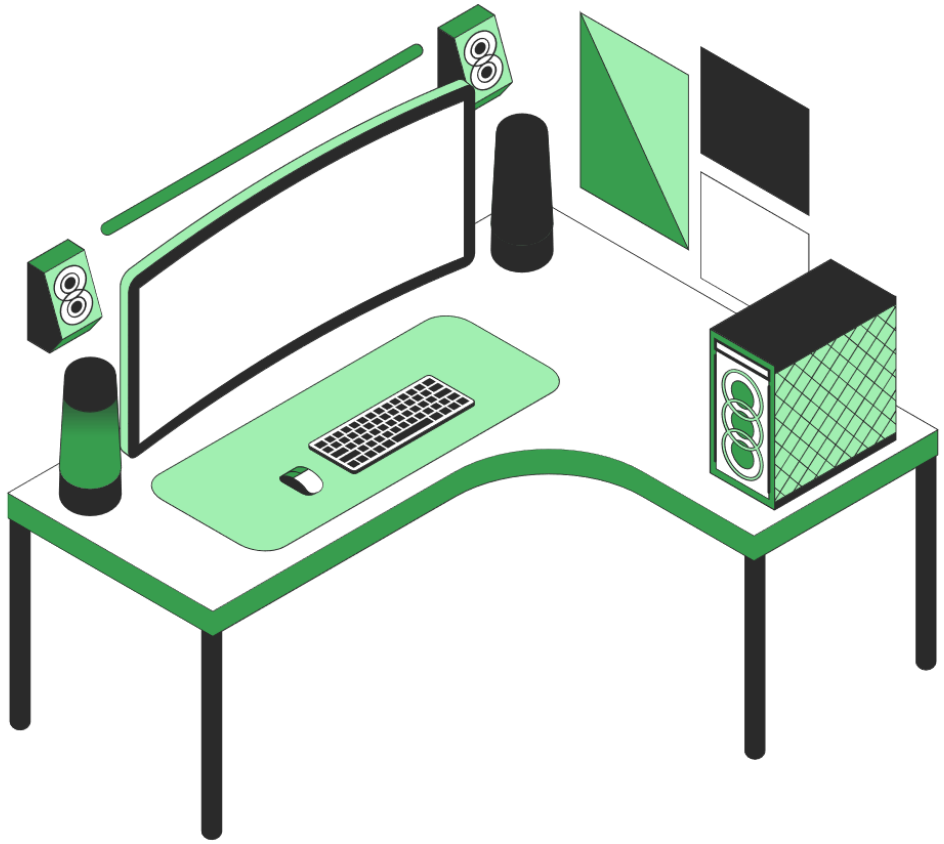
Amazon EFS with One Zone storage classes



Amazon EFS with One Zone storage classes




İboub>>>22
out>>>all
İboub>>>2049 sec
out>>>all
3
EFS
Security Group
2
Public Subnet 1a
EC2
Security Group -aa.Sec.group
Amazon EFS
1
Internet
Gateway
4
EC2
EC2
Security Group -2
Private Subnet 1a



Do you have any questions?

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