

AWS CERTIFIED SOLUTION ARCHITECT: ASSOCIATE

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INTRODUCTION ELASTIC FILE SYSTEM

- Introduction to EFS
- Understanding EFS Architecture
- Deploying EFS
- Attaching it with EC2 instances

Elastic File Service (EFS)

What is EFS?

Advantages

Disadvantages



EFS Security

Accessing File
System from EC2

Mount Targets



NETWORK ATTACHED STORAGE ON AWS

AWS EFS

Simple, scalable file storage for use with Amazon EC2

Storage capacity is elastic, growing and shrinking automatically as you add and remove files

NETWORK ATTACHED STORAGE ON AWS

AWS EFS

EFS supports the Network File System versions 4.0 and 4.1 (NFSv4) protocol

Pay only for the storage used by your file system. No need to provision storage in advance & no minimum fee or setup cost



What is EFS?

- Simple, scalable file storage for use with Amazon EC2 instances.
- Network Attached Storage (NAS).
- Can be accessed by multiple EC2 instances at the same time.

File	Object	Block
• EFS	• S3 • Glacier	• EBS • Instance Store

Advantages of EFS

- Fully managed service.
- File system grows and shrinks automatically to petabytes size.
- Pay only for the storage space you use, with no minimum fee.
- Throughput scales automatically to ensure consistent low latency.
- Can support thousands of connections.
- Multi AZ replication.

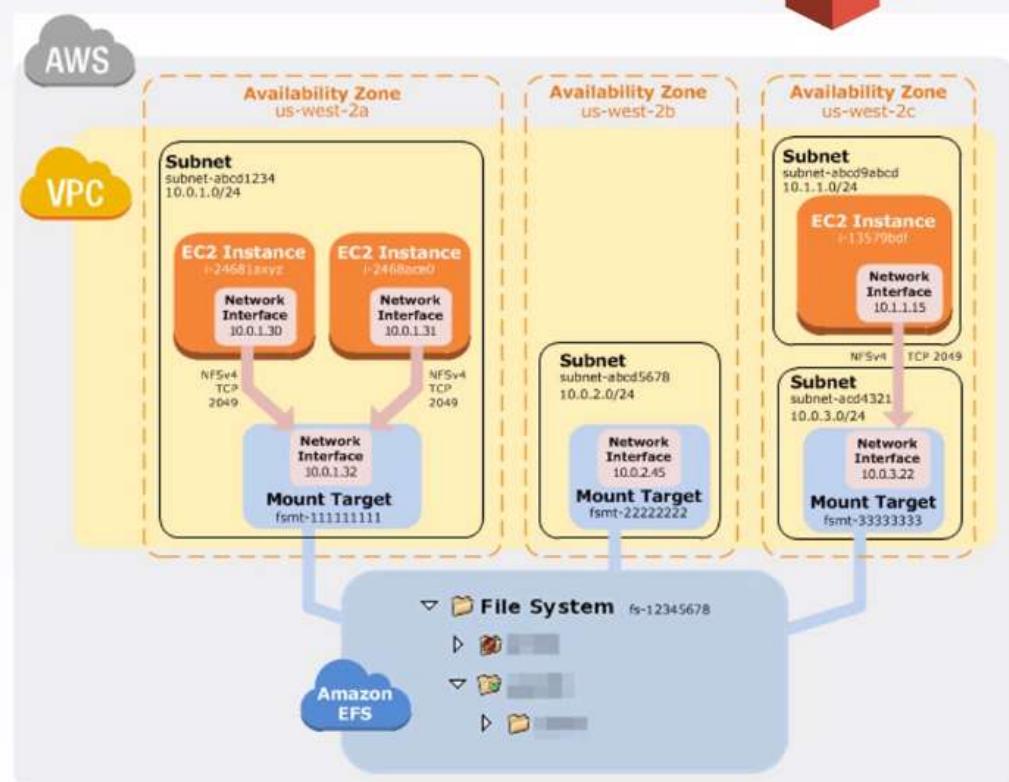
Disadvantages of EFS

- Not available in all regions.
- Cross region capability not available.
- More complicated to provision compared to S3 and EBS.

Mount Targets



- Required to access EFS from a VPC.
- VPC NFS endpoint.
- Has an IP address and a DNS name you can use in the Linux mount command.
- Can be mounted by multiple EC2 instances.
- Can be in different subnet to instance but different AZ.



Accessing File System from EC2

- Requires an NFS client (standard on current Linux distributions).
- Mount file system using the Linux mount command similar to EBS and instance store.
- File system DNS name (easiest) or mount point DNS name can be used to mount EFS on EC2.

EFS Security

- IAM user permissions for create, update and delete.
- EC2 security groups can be set as inbound rules for EFS and vice versa.
- NACLs can be used to control traffic.
- Linux/Unix file root-only permissions by default (CHOWN, CHMOD).

Architecture

