# **EFS**

An amazon EFS File System is accessed by ec2 instance running within a VPC. Instances connect file system using network interface called munt target. Each mount target is assigned one IP address which we assign automatically, or you can specify.

Fully managed file system with easy to setup and scale. Supports standard File System API, strong consistency, and file locking.

* Automatically scale from Gigabyte to Petabyte without needing to provision storage.
* No minimum fee (pay per go)
* Designed to be highly durable and highly available.
* Multiple ec2 instances (100s) can access EFS with consistent performance.

# **FSx for Windows File Server**

Simple, fully managed, highly reliable windows file server and accessible over industry standard SMB protocol.

* Built on windows file server and provides various administrative features like quotas, deduplication and end user file restore.
* Integrates easily with Microsoft Active Directory (Microsoft AD)
* Offers single and multi-AZ deployment features.
* SSD and HDD storage features with fully managed backups.
* Data is automatically encrypted at transit and rest.
* Dynamically scalable for storage and throughput.
* Amazon FSx for Windows File Server supports access across VPCs, and Regions via Direct Connect or VPN (on-premises) and VPC peering or AWS Transit Gateway. You can share your data sets across multiple applications, internal organizations or environments spanning multiple VPCs, accounts or regions using inter-VPC, inter-account and inter region access.

**Amazon FSx for Lusture**

Makes it easy to and cost effective to launch and run worlds most popular high-performance file system.

Best fit for workloads where speed matters e.g., machine learning, high-performance computing and video processing etc.

* Allows your work load to process data with consistent sub-millisecond latencies up to hundreds of gigabytes per second of throughput.
* POSIX compliant and therefore supports LINUX based file systems.
* Seamlessly integrated with Amazon S3 (connect your S3 data sets to your FSx for Lustre file system, run your analyses, write results back to S3, and delete your file system), **Amazon SageMaker, Amazon Elastic Kubernetes Service (EKS), and AWS ParallelCluster.**
* Accessible from on-premises over Direct Connect and VPN connections.
* File system data is automatically encrypted in rest and transit.

Amazon FSx for Lustre is integrated natively with Amazon S3.

AWS Datasync only supports Amazon FSx for Windows File Server Ssytem. It does not support POSIX compliant system i.e., FSx for Lustre

AWS Parallel cluster and Amazon FSx file system are suitable for HPCworkloads on AWS, With Parallel cluster you can control the infrastructure as it is a self-service cluster management tool.