

# A V E R E

## Avere & Amazon Web Services

### Avere Key Benefits

- Performance leader with millions of ops/sec performance and hundreds of GB/sec throughput in a max cluster
- Freedom to store data in Amazon S3 (Standard or Standard-Infrequent Access) to take advantage of improved economics
- Virtual FXT for Amazon EC2 and Physical FXT Filers provide flexibility to store data and run applications on premises and on the AWS Cloud
- Leverage Virtual FXT for burst compute and permanent on cloud infrastructures
- Dynamic tiering of active data to the edge helps prevent any potential latency
- NFS and CIFS provide familiar access protocols for users and applications
- Clustering provides scalable performance, scalable capacity, and high availability
- Global namespace joins Amazon S3, on-premises object, and legacy NAS into single pool of storage
- FlashMove™ transparently moves live, online data to AWS Cloud
- FlashMirror™ replicates data to AWS Cloud for disaster recovery
- AES-256 encryption keeps data secure
- Savings of 70% or more over traditional NAS
- Full support of (ATO) Amazon Commercial Cloud Services (C2S) region
  - ICD 503 accreditation
  - KMIP compliant

The global distribution and explosive growth of unstructured data is driving companies to explore the economies of cloud storage. File content has expanded beyond simple text-based documents to multi-media files with high-definition pictures, audio, and video created, edited, and managed around the world consuming massive amounts of storage. Assuming an analyst predicted 50% growth per year, a company storing 100TB today will need 1PB in just six years.

The cloud offers economical options for storing and accessing all of this data. Out-sourcing data storage can allow companies to realize IT efficiency and economies of scale that only an expert, scalable, IT-infrastructure provider such as AWS can deliver.

### Challenge

Amazon Web Services (AWS) provides storage that is simple to manage and scale, with built-in resiliency that removes many of the backup and replication challenges of traditional storage. Compared to traditional storage, cloud storage offers lower capital equipment costs, lower operating expenses, simplified management, and reduced facility footprint. With massive scalability, simplified management, and built-in redundancy, AWS provides several technical solutions for large-scale file stores. However, in order to fully embrace cloud storage, companies must overcome its two main drawbacks; low performance and an object-based interface. Avere FlashCloud on FXT Edge Series filers effectively addresses these challenges with AWS Cloud, delivering scalable Networked Attached Storage (NAS) performance up to millions of ops/sec and throughput up to hundreds of GB/sec in a clustered configuration of 3 to 50 Edge filers to keep pace with



Advanced  
Technology  
Partner

Storage Competency

Digital Media Competency

Public Sector Partner

Marketplace Seller

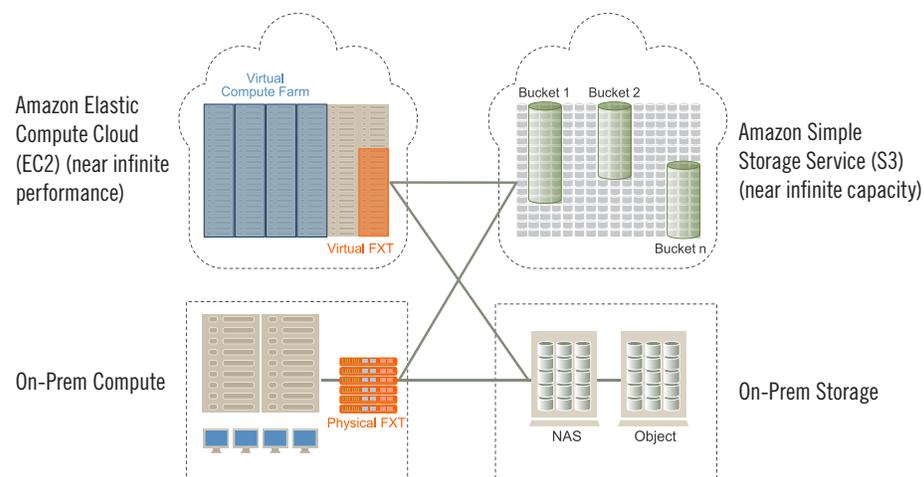


Figure 1: FXT Edge Filers provide flexibility to store data and run applications on premises or on the AWS Cloud

## Amazon Web Services Key Benefits

### Amazon Simple Storage Service (Amazon S3)

- Designed for 99.99999999% durability
- 99.99% availability SLA
- Available to Avere customers in nine regions
- Price drop every year since launch—starts at \$.03/GB/Month

### Amazon Elastic Compute Cloud (Amazon EC2)

- Obtain and configure capacity with minimal friction
- Complete control of your computing resources run on AWS's proven computing environment
- Obtain and boot new server instances in minutes
- Pay only for capacity that you actually use

the increasing demand of users and applications and providing access to Amazon Simple Storage Service (S3) via NAS protocols, removing the need for changes to existing applications or user-access methods.

## Reinventing the Next Generation Enterprise Storage

Avere FXT Edge Filers provide enterprises with complete flexibility to store their data and run their applications on premises or on the cloud, wherever is makes the most sense. Physical FXT Edge Filers deployed on premises provide extreme performance scaling and complete NAS functionality for file-based applications and manage public and on-premises object storage and existing NAS in a global namespace with transparent data mobility. Virtual FXT Edge Filers provide the same great value with the added convenience of a software-only solution that can be run on Amazon Elastic Compute Cloud (EC2) for burst compute and permanent on cloud IT infrastructures. Both Physical and Virtual FXT Filers are designed to deliver high performance for Big Data applications, hide the latency to remote NAS or object-based storage, and provide complete flexibility for enterprises to adopt cloud infrastructures.

Whether physical or virtual, FXT Edge filers provide enterprise-class NAS functionality including NFS and CIFS protocols, scalable performance and redundancy to support any applications accessing shared storage resources. Take advantage of integrated on premise or on the cloud Big Data processing such as rendering, genomic sequencing, or financial analytics. Place file-based apps on the cloud like document management, file serving or setup an active archive leveraging Avere's physical and virtual Edge-Core architecture to migrate data to the cloud. Avere FlashCloud integrates Amazon S3 with legacy NAS filers into a global namespace (GNS). GNS provides enterprises the flexibility to store their data wherever it makes most sense and adopt AWS Cloud at a comfortable pace. Together, FXT Edge filers and flexible, scalable, pay-as-you-go AWS Cloud provide this optimized performance and capacity scaling while enabling 70% or more savings in total cost of ownership (TCO) compared to traditional NAS implementations.

To minimize latency and improve performance, Avere dynamically moves active data to the FXT Edge filers nearest to the users and application servers and less active data is efficiently kept on the AWS Cloud, providing low latency shared storage access to users and applications. Avere offers organizations an unprecedented opportunity to affordably leverage NAS for Big Data and other demanding applications. AWS Cloud offers an ideal solution for storing large amounts of unstructured data, and Avere provides technology to integrate that storage with existing NAS capacity and provide an easy on-ramp to the AWS Cloud.

Hardware Specs	Physical FXT				Virtual FXT	
Model / Instance	FXT 5850	FXT 5600	FXT 5400	FXT 5200	AWS r4/r3.8xlarge	AWS r3.2xlarge
CPU Cores	16 (physical)	16 (physical)	16 (physical)	16 (physical)	32 (virtual)	8 (virtual)
DRAM	768GB	384GB	256GB	128GB	244GB	61GB
NVRAM	4GB	4GB	4GB	4GB	-	-
Flash SSD Capacity	19.2TB	9.6TB	4.8TB	-	1TB or 12TB Persistent SSD	
SAS HDD Capacity	-	-	-	7.2TB	-	-
Network	4x25/10Gb + 4x1Gb	4x10Gb + 4x1Gb Ethernet			10Gb	High
Max. Nodes per Cluster	24					
Max. DRAM per Cluster	18.4TB	9.2TB	6.1TB	3.1TB	5.9TB	1.5TB
Max. SSD per Cluster	461TB	230TB	115TB	-	288TB	288TB
Max. SAS per Cluster	-	-	-	173TB	-	-