

Optimize your file-based applications on AWS



Take enterprise-grade to enterprise-great

Extend and migrate more efficiently to the cloud and gain control over your unstructured data.

The challenge

Object storage can be problematic for application performance. It's like bringing a monster truck to a Formula One race. It's slow, it doesn't handle well, and the tire changes are brutal.

Enterprise-scale file share workflows need the speed and agility of a true enterprise-grade data management solution. With the increased competition and corporate social responsibility pressures, dealing with unstructured data must be a top priority.

The opportunity

Get consistent performance and high availability with capacity efficiencies from a unified block and file storage service with multiprotocol support for Linux and Windows workloads. Whether from a self-directed or fully managed service it is easy to extend and migrate more mission-critical workloads.

By gaining value from your unstructured data, you can mitigate risk, achieve compliance, reduce your environmental impacts, and make full use of valuable business intelligence.

The state of cloud storage for file sharing

42%

of IT leaders expect to accelerate cloud file storage investments over the next 24 months.¹

54%

of revenue growth (YoY) for file services—the fastest growing revenue of all cloud services.²

74%

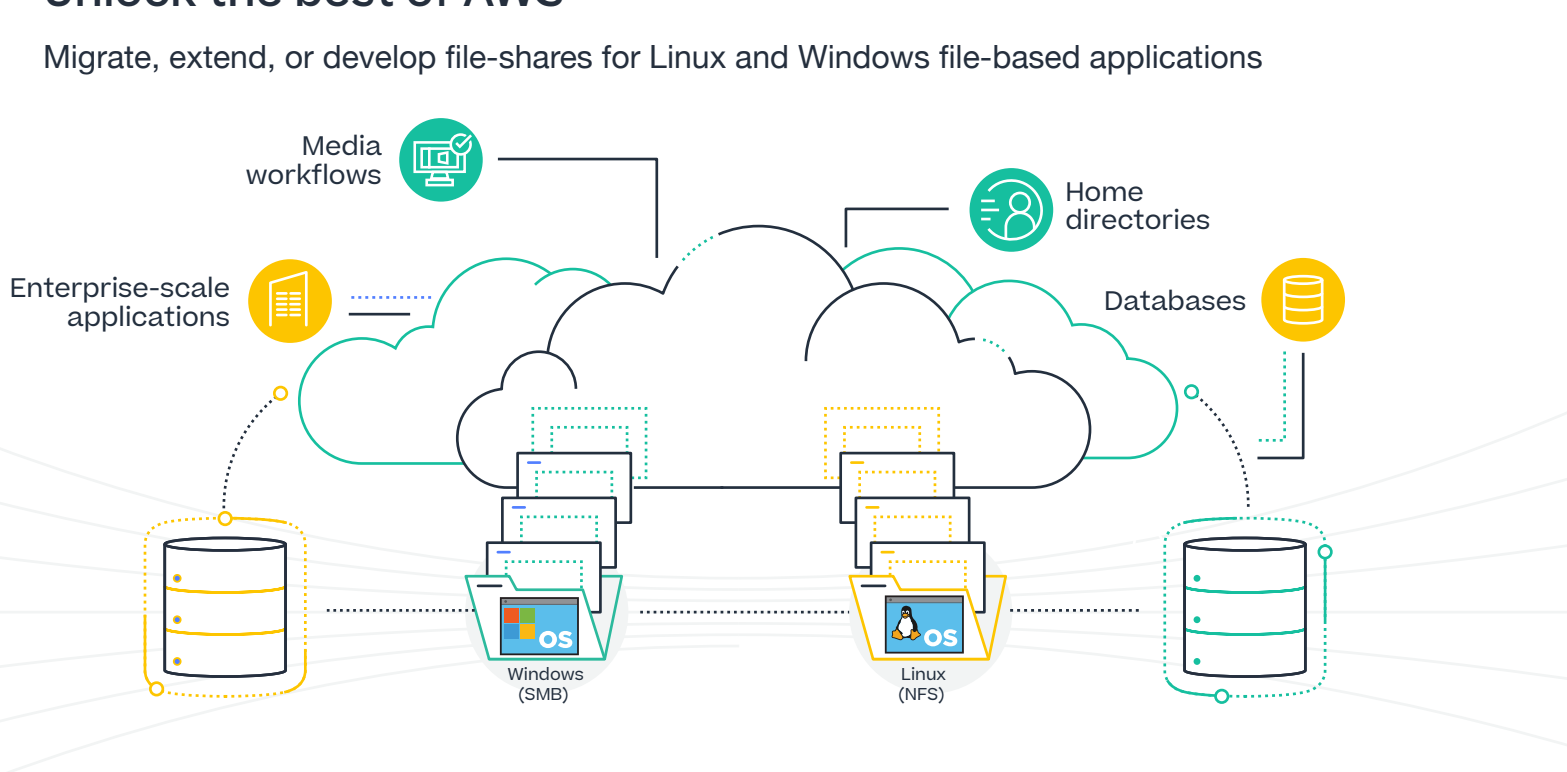
of on-premises applications are candidates for transitioning to the cloud.³

Five ways file sharing is better with NetApp and AWS

- Meet the specialists**
 As the proclaimed market leader by Gartner⁴, IDC⁵, and GigaOm⁶, NetApp[®] has partnered with AWS for more than a decade as the choice to extend, migrate, and manage enterprise-scale Linux, Windows, and iSCSI workloads with ease.
- Manage unstructured data with flexibility**
 Limit complexity by provisioning data across the hybrid cloud through one management heartbeat. Combine NetApp's ONTAP[®] enterprise-grade data services with the agility and scalability of AWS to achieve a ubiquitous data experience across the hybrid cloud from the self-directed NetApp Cloud Volumes ONTAP or as native AWS managed service in Amazon FSx for NetApp ONTAP.
- Unified file sharing, made easy**
 Solve performance challenges for any Linux or Windows shared storage environment (NFSv3/v4.1 and SMB3). With file storage services layered on top of native Amazon Elastic Block Store (EBS), you can get your mission-critical applications on AWS without painful refactoring.
- Resilient disaster recovery**
 Enable more capacity-efficient and cost-effective backup for disaster recovery. Get highly available (RPO=0) architecture that prevents downtime. For disaster recovery, use data replication across zones and regions with zero-impact NetApp Snapshot[™] copies and instant-restore Snapshot copies.
- Storage efficiencies abound**
 Achieve 99.99% uptime and minimize storage sprawl with NetApp's instant, zero-footprint Snapshot technology. Take more recovery points without effecting performance or cost and get a better recovery point in case anything goes wrong.

Unlock the best of AWS

Migrate, extend, or develop file-shares for Linux and Windows file-based applications



Public cloud storage options are plentiful

What may seem like a shrewd fiscal decision can slow app migrations, underperform woefully, or leave unstructured data vulnerable to unavailability. Enterprise mission-critical workloads often require unified shared file services. Don't worry, we've got your file system covered.

“It's pretty risky work to move all this data and not lose it. We wouldn't trust any other vendor to help with this.”

Mike Maloney,
Vice President of SaaS, Security, and IT,
D2L

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“We selected NetApp for the good performance presented in proof of concept, ease with system integration, and response time improvements once we put the solution to work.”

Hugo Aquino
Director of Infrastructure Services and Technology Operations, Copa Airlines

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Competitive edge

Run performance-intensive and latency-sensitive Linux and Windows file workloads on AWS. NetApp makes it easy for enterprise line-of-business and storage professionals to use the underlying shared file storage service in numerous use cases.

- Run file shares on AWS**
 - Launch, run, and scale NFS and SMB shared file storage for business apps and address storage-heavy workloads connecting to Amazon EC2, Amazon ECS, VMware Cloud on AWS, Amazon WorkSpaces, and Amazon AppStream.
 - Optimize cost, time, and latency by migrating enterprise-scale architectures and hybrid cloud workloads, with support for software-as-a-service (SaaS) apps from a multiprotocol file system.
 - Migrate storage-heavy apps like ERP, CRM, or Microsoft Exchange without rearchitecting or sacrificing performance and reliability.
- Database and Microsoft SQL Server deployments**
 - Automatically handle data replication and failover with a multi-AZ file system enabling high availability and durability for mission-critical database workloads.
 - Simplify shared storage to host your database deployments while reducing TCO.
 - Easily migrate SAP HANA and Microsoft SQL Server workloads to AWS with SAO. Leverage the NetApp BlueXP[™] copy and sync service or AWS DataSync to migrate aging third-party NAS filers.
- Home directories**
 - Share your user home directories and user file shares to hundreds of thousands of users with permissions at the file or folder level.
 - Easily move on-premises unstructured file shares to AWS by using the NetApp SnapMirror[®] feature available from Amazon FSx for NetApp ONTAP and Cloud Volumes ONTAP. Leverage the NetApp BlueXP[™] copy and sync service or AWS DataSync to migrate aging third-party NAS filers.
 - Easily authenticate users for Microsoft Active Directory on Amazon EC2, Amazon WorkSpaces, and Amazon AppStream 2.0.
- Media workflows**
 - Gain consistent performance needed for media workflows like media transcoding, processing, and streaming.
 - Get a shared file system with the high throughput and low latencies these applications and workloads require.
 - Consolidate data as a single source of truth. While files are edited, they're protected through an unlimited number of NetApp Snapshot copies.
- Web serving and content management**
 - Obtain the storage needed for content management and web serving applications, like Microsoft Internet Information Services (IIS) and WordPress. Store and serve files for websites and internal portals.
 - Use shared file storage to access files for multiple web or content servers.

Unmatched solutions for your unstructured data

Gain the freedom to run Linux and Windows apps across the hybrid AWS cloud without redesigning code, processes, or teams. Amplify your cloud storage infrastructure and data services through a unified NetApp Cloud Volumes Platform:

- Simplify:**
 Deploy, discover, manage, and optimize data and its infrastructure from the comfort of [NetApp BlueXP](#), a unified control plane delivering a simplified hybrid multicloud experience.
- Protect:**
 Meet uptime and availability SLAs with automatic [NetApp SnapMirror](#) replications across AWS Availability Zones (AZs) and restore instantly with zero-impact [NetApp Snapshots](#) copies. Gain highly durable daily backups with incremental forever, block-based backups from [NetApp BlueXP backup and restore](#).
- Access:**
 Extend on-premises data into AWS with [NetApp SnapMirror](#) or [NetApp BlueXP copy and sync](#) for aging third-party NAS filers. Reach data from the edge with [NetApp Global File Cache](#) and entertain latency sensitive on-premises workloads by bursting to AWS using [NetApp FlexCache](#).
- Govern:**
 Meet compliance standards for unstructured data and adhere to GDPR and other compliance standards by identifying sensitive PII data from a compliance dashboard with [NetApp BlueXP classification](#).
- Monitor:**
 Gain visibility across the entire infrastructure (on premises to cloud) and identify apps poised to migrate to AWS with BlueXP observability service using [NetApp Cloud Insights](#)—then proceed to prevent ransomware and other external threats with the Storage Workload Security feature.
- Optimize:**
 Resources with fully elastic storage tiering using [NetApp BlueXP tiering](#) to move cold data to Amazon S3. Scale compute resources to maximize use for up to 90% lower cost with [Spot Ocean](#).

Questions to guide your AWS journey

- Would you like to manage your data with the same set of features, no matter where it's stored?
- Are applications “stuck” on-premises that you would like to move to the cloud?
- Would you benefit from a lift and shift of Linux and Windows workloads to AWS that avoids the need to refactor?
- Can you take advantage of storage efficiencies that minimize your storage footprint and maximize your cost savings, while protecting against downtime with high-availability?
- Does the lack of performance or visibility across your hybrid cloud environment keep you from moving more workloads to the cloud?

Licensing Cloud Volumes ONTAP

| Free Edition | Essential | Professional |
|--|--|--|
| Deploy Cloud Volumes ONTAP single node or high availability from NetApp BlueXP | Deploy Cloud Volumes ONTAP single node or high availability from NetApp BlueXP | Deploy Cloud Volumes ONTAP single node or high availability from NetApp BlueXP |
| Up to 500GB <i>Free of charge</i> | Capacity minimum: 4TB | Capacity minimum: 4TB |
| Upgrade to Essential or Professional for more capacity | Purchase from the AWS Marketplace or bring your own license (BYOL) | Purchase from the AWS Marketplace or bring your own license (BYOL) |
| Limited support | Pay monthly or pay in fixed terms with discounts: 1, 2, or 3 years. | Pay monthly or pay in fixed terms with discounts: 1, 2, or 3 years. |
| | | Bundled with BlueXP backup and recovery service using Cloud Backup |

Start with NetApp BlueXP, a unified control plane delivering a simplified hybrid multicloud experience for storage and data services across on-premises and AWS cloud environments.

[NetApp Cloud Volumes ONTAP pricing](#)

Licensing Amazon FSx for NetApp ONTAP

With Amazon FSx for NetApp ONTAP, you don't pay for resources that you don't want. You pay only for the resources you use, with no minimum commitments, licensing costs, or up-front fees. You are billed by the second for your Amazon FSx for NetApp ONTAP file systems, and you will be billed monthly for any separately licensed NetApp software that are enabled.

[Amazon FSx for NetApp ONTAP pricing](#)

Additional resources

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| Talk to a specialist | Cloud Volumes ONTAP overview | Cloud Volumes ONTAP Quick Start |
| FSx for ONTAP overview | FSx for ONTAP user guide | NetApp services portfolio for AWS |