

# Natively launch, run and scale apps on AWS with ease

## Extend enterprise-grade to enterprise-great

Easily extend to the cloud, migrate apps, eliminate management overhead ... and enjoy NetApp's expansive suite of data services to make life easy – all nestled in an AWS-native experience.

### The challenge

Companies across all industries are looking to the cloud to provide common file shares for Windows and Linux workloads. Some public clouds can support general file services, but these tend to be siloed, complex, slow, and risky.

Legacy vendors offer "cloud" as an afterthought, often leaving out basic functionality. Worse yet, their offerings can be cost-prohibitive, difficult to scale and provision, and not integrate well with their applications. Don't get left behind.

### The opportunity

Trusted in thousands of data centers, NetApp® ONTAP® provides a powerful set of storage and data management features providing the same consistent experience on premises as in the cloud. Amazon FSx for NetApp ONTAP brings the full capabilities of ONTAP to a native AWS managed service to easily power primary workloads and quickly build modern applications.

Get full support for block and file storage for Windows and Linux workloads. It's the first time these multiprotocol capabilities have been available as a fully managed service—all integrated with the complete NetApp portfolio.

What you get in the data center—performance, control, reliability—you can now get sold, managed, and supported by AWS.

## The future of enterprise data-led migration

74%

74% of the applications still residing in organizations' on-premises data centers (on average) are considered to be candidates for transitioning to the cloud<sup>1</sup>

60%

60% of organizations haven't reached scale for their digital initiatives<sup>2</sup>

55%

55% cite understanding cost implications of software licenses as a top cloud challenge<sup>3</sup>

## Five ways Amazon FSx for NetApp ONTAP unlocks the best of AWS and NetApp

- Best of both industry-leading worlds**  
Amazon FSx for NetApp ONTAP is delivered on AWS services and grown from ONTAP's industry-leading block and file storage (Gartner, IDC), exposing NFS, SMB, and iSCSI. It's never been easier to extend or lift and shift Linux and Windows workloads into the hybrid or native AWS cloud. NetApp [Cloud Insights](#) helps you plan the best migration possible.
- Bring your own preferred capabilities**  
Set up, manage, and monitor your data with the combined capabilities of the AWS Management Console and NetApp [Cloud Manager](#). This is the only cloud service to support both AWS and NetApp APIs. So, configure away with NetApp ONTAP features like [Snapshot™](#) copies, [FlexCache](#), or [FlexClone](#) and integrate your favorite AWS services such as CloudWatch, Amazon EKS, and ROSA.
- Seize AWS sub-millisecond response times**  
Migrate more mission-critical apps to AWS with sub-millisecond response times, multiple GB/s of throughput, and 100,000+ IOPS per instance. Easily burst on-premises workloads to AWS with the caching features of [FlexCache](#) and NetApp [Global File Cache](#), which together make big files act like local files. And when it comes time to migrate third-party data, ditch the kitchen sink for NetApp [Cloud Sync](#).
- Optimize price and performance**  
Get ONTAP's cost-saving storage efficiencies with data deduplication, compression, compaction, and thin provisioning. Use NetApp [Cloud Tiering](#) to efficiently manage your storage pool by placing your data at the right tier and at the right time. Proactively scale compute resources to maximize use for up to 90% lower cost with [Spot Ocean](#).
- Data protection that doesn't quit**  
In the event of data loss, ransomware, or data corruption—instantly restore data with zero-impact NetApp [Snapshot](#) copies. Protect against file system unavailability with automatic [SnapMirror](#) replication. Add on AWS Backup (powered by [NetApp Cloud Backup](#) for a simple and cost-effective backup-as-a-service with incremental-forever, block-based backups, making it a perfect solution for large NAS datasets.

## Unlock the best of AWS

For your enterprise-grade data management needs, Amazon FSx for NetApp ONTAP has you covered.



## Introducing AWS to enterprise-grade file services

Amazon FSx for NetApp ONTAP makes app migration, bursting, backup, and recovery of mission-critical workloads as easy as pie. Start with the agility and scalability you expect from AWS, and then extend from enterprise-grade to enterprise-great with NetApp's comprehensive suite of data services baked in. Always on, always available, and easily consumed—this is not your average AWS experience. Now that's tasty, no matter how you slice it.

“By fully supporting NetApp ONTAP APIs and features like SnapMirror and SnapVault, Amazon FSx for NetApp ONTAP enables NetApp customers to seamlessly replicate their data from on premises to the AWS Cloud.”

Tom DeCoster  
Vice President Hybrid Infrastructure at CDW

## Competitive edge

More choice, more options, better public cloud—this puts AWS at the top of the public cloud exosphere when it comes to options for customers. Low latency, lower costs and lowest data risk, streamlined manageability, and benchmark-tested performance.

- Full-featured ONTAP capabilities:**
  - Effortlessly lift and shift from on-premises ONTAP deployments into AWS in just a few clicks.
  - Extend your enterprise cloud on AWS by optimizing scale, time, and latency—no painful refactoring or changes to code required.
  - Simplify on-premises to cloud storage management from a single-pane-of-glass interface with [Cloud Manager](#) to eliminate needless complexity.
- Built in AWS, powered by ONTAP, sold via AWS:**
  - Experience the agility, scalability, and reliability of running your applications on AWS with the same ONTAP capabilities, APIs, and high performance you'd expect on premises.
  - Enable seamless read and write activity for file sharing between on-prem and the cloud with [Global File Cache](#) and [FlexCache](#).
  - Enjoy always-on productivity with 4.5 nines of availability and durability.
- Real-time data protection with analytics:**
  - Monitor and analyze with complete infrastructure visibility to reduce mean time to resolution (MTTR) by up to 90% using [Cloud Insights](#).
  - Optimize infrastructure costs for containers by scaling compute resources and achieve up to 90% lower cost with [Spot Ocean](#).
  - Run cloud infrastructure without the hassle of managing servers while [Spot Elastigroup](#) provisions, scales, and right sizes your workload requirements.
- Less complexity and more productivity:**
  - Enable admins and developers to automate and optimize in a few clicks as they launch and run apps from a full-featured ONTAP file service managed by AWS.
  - Enjoy dynamic access to cloud-based file services that mirror production environments.
  - Clone writable volumes to slash the infrastructure provisioning phase of projects.

“Amazon FSx for NetApp ONTAP makes it easy for organizations to extend the power of ONTAP into AWS, enabling the teams to easily use the NAS features and capabilities in AWS that they've come to love on premises.”

Wayne Duso  
Vice President of File, Edge, and Data Services, AWS

## Extend your AWS experience from enterprise-grade to enterprise-great

Together, this AWS, we enable customers to launch and run apps in the cloud more efficiently. This AWS service allows you to enjoy the agility, scalability, security, and simplicity of AWS without giving up the ONTAP capabilities you have already built into your processes.

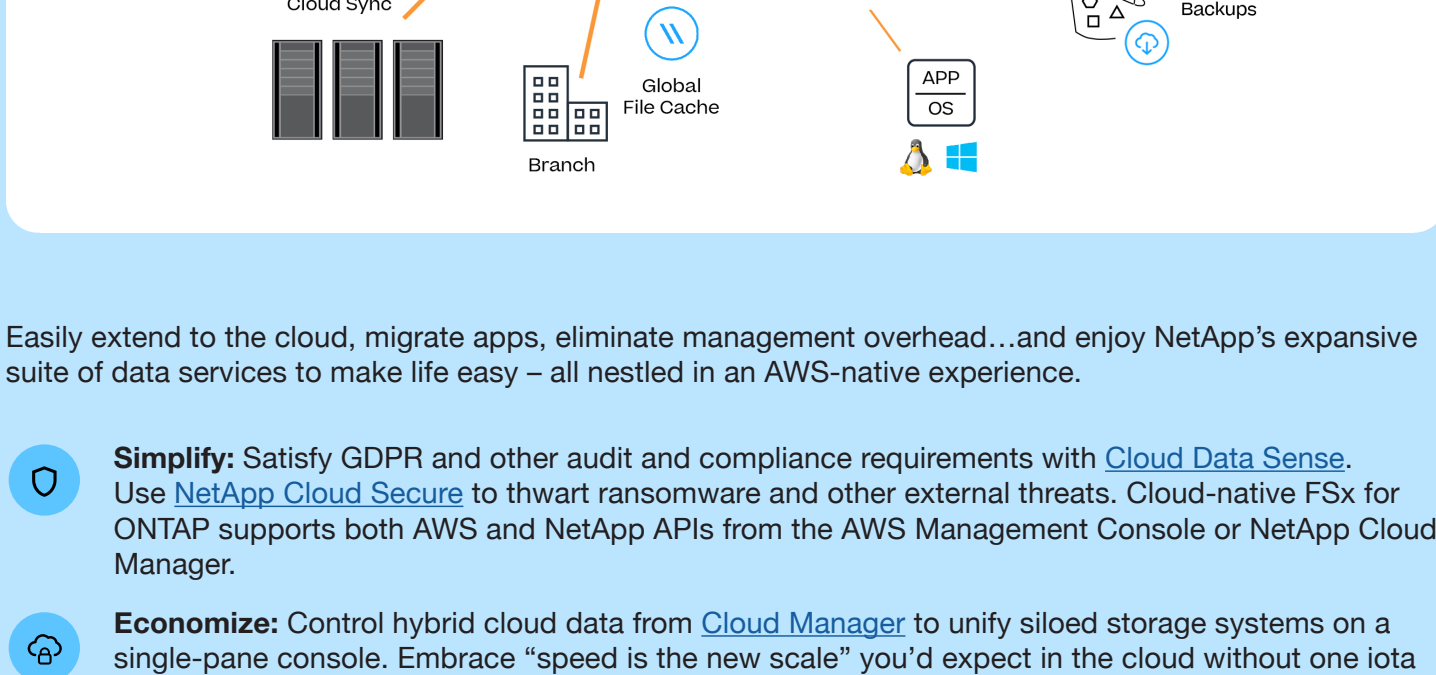
Extend the advantages of FSx for ONTAP and take data beyond file storage with NetApp's comprehensive suite of cloud data services. The efficiencies you'd expect, the data services you need—all from one ONTAP platform. That's what "enterprise-great" really means.

## Ease migration to AWS while keeping on-prem standards

With capabilities for data-led migrations, performance workloads, petabyte-scale datasets, and data protection, Amazon FSx for NetApp ONTAP can be used for network file shares, cloud-based backup and DR, primary applications, born-in-the-cloud applications, and speeding up dev/test cycles.

- Variety of file shares**  
*User shares, department shares, home directories*  
Home directories and project shares require reliable and scalable data access for thousands of users. FSx for ONTAP is compatible with all popular client operating systems, integrating with NetApp FlexCache and Global File Cache to provide low-latency access from on premises. Take advantage of the broadest global infrastructure and full range of AWS service integrations.
- Data protection and replication**  
*Backup, archive, and disaster recovery from on premises and across regions*  
Managing backups and long-term data retention on premises can be complex, time-consuming, and costly. Meet regulatory, data retention, or disaster recovery requirements: FSx for ONTAP offers centralized, policy-based Snapshot, SnapVault, and SnapMirror to easily backup, archive, or replicate your on-premises workloads to AWS regions.
- IT applications and databases**  
*SAP, Oracle DB/RAC, SQL Server, CRM, ERP, VMware*  
FSx for ONTAP delivers high-performance, low-latency shared storage that meets the operational requirements of the most demanding enterprise applications, supporting highly available database workloads such as Oracle RAC and Microsoft SQL Server, as well as virtual infrastructure.
- Line-of-business applications**  
*EDA, M&E post-production, Financial Services, Health Care & Life Sciences*  
A broad set of industries, including Media & Entertainment, Financial Services, and Health Care & Life Sciences, depend on fast storage that can be shared across latency-sensitive Windows and Linux applications. Get the multiprotocol support for complex workflows with the flexibility to burst on-premises data to AWS.
- Build applications faster**  
*Run cloud-native apps, and get full support for microservices and containers management*  
Automate within minutes, then combine infrastructure-as-code, flexible compute bursting, and FSx for ONTAP storage to create, clone, and replicate your configuration and resources with a few clicks of a button. It's faster and easier than ever to develop and test new applications.

## Unmatched solutions for your enterprise cloud



Easily extend to the cloud, migrate apps, eliminate management overhead...and enjoy NetApp's expansive suite of data services to make life easy – all nestled in an AWS-native experience.

- Simplify:** Satisfy GDPR and other audit and compliance requirements with [Cloud Data Sense](#). Use [NetApp Cloud Secure](#) to thwart ransomware and other external threats. Cloud-native FSx for ONTAP supports both AWS and NetApp APIs from the AWS Management Console or NetApp Cloud Manager.
- Economize:** Control hybrid cloud data from [Cloud Manager](#) to unify siloed storage systems on a single-pane console. Embrace cloud "speed" is the new "scale" you'd expect in the cloud without one iota of administrative overhead. Get access to important metrics to slash troubleshooting time, predict performance needs, and regain control over infrastructure costs.
- Protect:** Provide disaster recovery for on-premises and cloud data with [SnapMirror](#) along with automated data synchronization from [Cloud Sync](#). Reduce backup times and instantly restore data with zero-impact [Snapshot](#) copies. Get built-in automation to replicate copies across AWS Availability Zones (AZs) and gain control with cost-effective, incremental-forever, block-based backups.
- Consolidate:** Unite dozens or hundreds of distributed file servers into a single AWS footprint with [Global File Cache](#) to save up to 70%. You can do without the headaches of data silos. Consolidate for efficiency with multiprotocol support for Linux, Windows, and iSCSI instances.
- Optimize:** Extend resources. Build applications faster with multiprotocol support, hybrid caching, and bursting capabilities. Continually optimize storage and compute resources with [Spot by NetApp](#) and reduce costs up to 90%.

## Licensing

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 portfolio services that are enabled.

## Additional resources

<a href="#">Amazon FSx for NetApp ONTAP solution page</a>	<a href="#">Book an assessment with an AWS cloud specialist</a>	<a href="#">Getting started with Amazon FSx for NetApp ONTAP</a>
<a href="#">Amazon FSx for NetApp ONTAP service overview</a>	<a href="#">Amazon FSx for NetApp ONTAP service pricing</a>	<a href="#">Amazon FSx for NetApp ONTAP Frequently Asked Questions</a>

## About NetApp

In a world full of generalists, NetApp is a specialist. We're focused on one thing, helping your business get the most out of your data. NetApp brings the enterprise-grade data services you rely on into the cloud, and the simple flexibility of the cloud into the data center. Our industry-leading solutions work across diverse customer environments and the world's biggest public clouds.

As a cloud-led, data-centric software company, only NetApp can help build your unique data fabric, simplify and connect your world, and securely deliver the right data, services, and applications to the right people—anytime, anywhere.

Sources:  
1. <https://www.netapp.com/pdf/Items/medias/27893-ESG-InstaGraphic-NetApp-CVD-AWS-File.pdf>  
2. <https://www.insightcloud.com/Transform>  
3. <https://info.flexera.com/CM-REPORT-State-of-the-Cloud>