

NETAPP CLOUD VOLUMES ONTAP FOR AWS OUTPOSTS



Get an on-premises hybrid AWS cloud experience.



Partnership strength

AWS, the industry-leading public cloud provider, and NetApp, the industry leader in enterprise-grade storage, have partnered to deliver application-driven storage for business-critical workloads. NetApp is positioned to harness AWS's advanced features and deliver a safer, faster way to migrate, deploy, and manage production-level applications, while gaining cloud scalability, agility, and cost efficiencies.

NetApp has hundreds of AWS success stories in delivering Windows (SMB) and Linux (NFS) file shares, and block-level iSCSI storage that serves NAS and SAN protocols, for cloud-native workloads and hybrid cloud-ready applications.

The challenge

Every company is at a different stage on its journey to the cloud. However, some workloads must remain on premises because of low latency, data processing, or local data storage needs, and to meet regional compliance and data privacy requirements.

In today's world of AI, GenAI, and analytics, enterprises need all the data-crunching capacity they can get. When you deploy new services or run applications with varying usage needs, the cloud provides a level of flexibility that allows you to pay for what you need, when you need it. But even though the cloud has become synonymous with flexibility and efficiency, some applications are not moved to the cloud. This is because organizations need to modernize applications, acquire new knowledge, and update policies, making the cloud journey slow, expensive, and complex.

As enterprises adopt the cloud for agility and lower costs, they also want robust AWS-native features on premises, so that IT can build and run modern, secure, application-driven cloud workloads. Many compute- and storage-intensive workloads or graphics-intensive programs with fixed usage patterns continue to be deployed in a more traditional fashion: in the on-premises data center. This situation creates disparate development and operating models that miss out on the benefits of the AWS Cloud.

Instead of using siloed models, what if developers could use the same services and APIs that they use in the cloud to develop applications on premises? What if IT could use the same tools to manage and operate IT resources across on-premises environments and cloud? What if your organization could get a truly consistent hybrid experience?

Truly consistent hybrid cloud experience

Customers need to control what happens to their data no matter where it is. Enterprises must exploit the benefits of public cloud infrastructure and services in models that best fit their applications' needs—focusing on data storage and delivering business value.

AWS Outposts is a fully managed service that brings the public cloud on site. It offers the same AWS hardware infrastructure, services, APIs, and tools to run your applications on premises and in the cloud. AWS compute, storage, database, and other services run locally on AWS Outposts, and you can scale your on-premises applications by using familiar AWS services and tools.

AWS Outposts are connected to the nearest AWS Region. Thus, they provide the same management and control plane services on premises for a consistent operational experience across your local and cloud environments. Your AWS Outposts infrastructure and AWS services are managed, monitored, and updated by AWS just as in the cloud.

Cloud Volumes ONTAP for AWS Outposts

NetApp Cloud Volumes ONTAP obtained the AWS Outposts Service Ready designation, which means that Outposts are tuned to use enterprise-grade file storage services with industry-leading NetApp ONTAP® technology. Cloud Volumes ONTAP can extend the AWS infrastructure to virtually any data center, colocation space, or on-premises facility for a ubiquitous hybrid cloud experience. NetApp has the only storage service deployed on AWS Outposts to run file shares and block-level storage serving NAS and SAN protocols (NFS, SMB, iSCSI). Cloud Volumes ONTAP integrates with AWS Outposts to unlock the best of cloud, addressing low-latency application needs and local data processing requirements across a broad range of workloads.

INDUSTRY USE CASES

NetApp® Cloud Volumes ONTAP® for AWS Outposts can address low latency application needs and local data processing requirements across a broad range of workloads.

- **Databases.** Experience minimal delay in writing and retrieving data.
- **Financial services.** Execute banking, payment processing, and risk management services at ultra-low latency.
- **Windows file shares.** Achieve highly scalable, highly available, and high-performing SMB shares.
- **High-performance computing.** Process, store, and analyze data with lightning-fast file services.
- **Manufacturing automation.** Run solutions such as manufacturing execution systems (MES) and supervisory control and data acquisition (SCADA) systems close to the factory floor.
- **Media and entertainment.** Access GPU innovations on premises for graphics processing, rendering, and real-time streaming.
- **Retail.** Enable retail innovations, in-store experiences, and local point-of-sale systems.
- **Telecommunications.** Update and orchestrate at scale to streamline management of virtual network function (VNF) lifecycles.
- **Healthcare.** Retrieve medical information rapidly while applying low-latency analytics and machine learning technology.

Cloud Volumes ONTAP for AWS

NetApp Cloud Volumes ONTAP for AWS provides an efficient, robust file and block storage infrastructure to match your application's needs.

Cloud Volumes ONTAP is well-architected cloud-native storage and data management software that is built on NetApp ONTAP technology. It offers a universal storage platform to address your cloud data needs for control, protection, and efficiency. With the same storage system in the cloud and on your premises, you don't have to train your IT staff in all-new methods of data management.

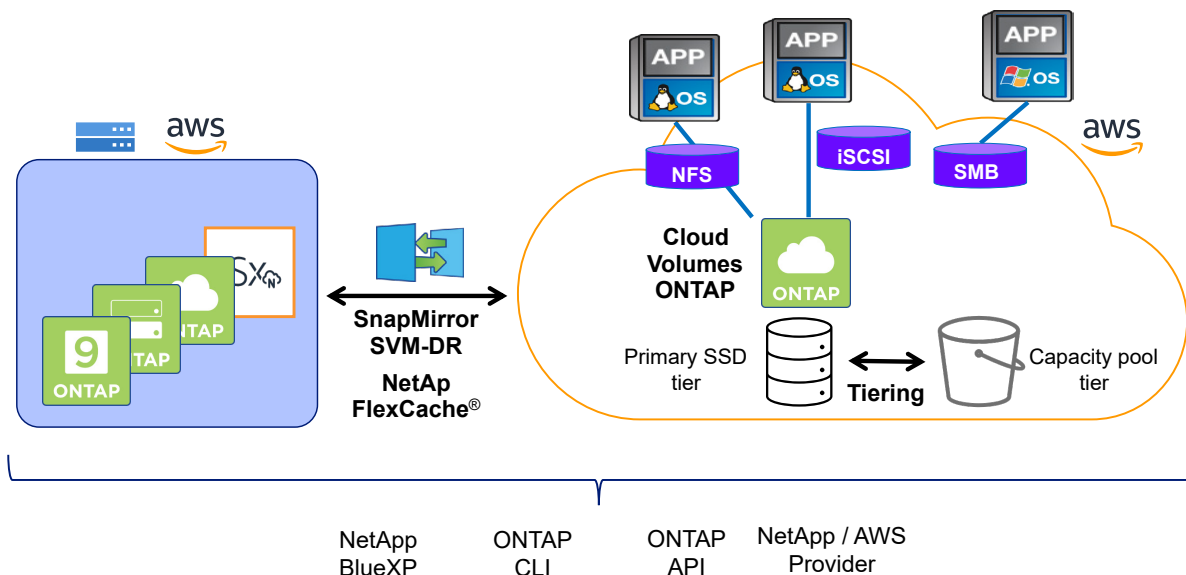


Figure 1: NetApp Cloud Volumes ONTAP for AWS.

Cloud Volumes ONTAP provides a data storage solution that fits many different customer requirements. These requirements range from disaster recovery, development, and test environments to critical applications that require highly available nondisruptive operation, such as production business applications and file services using NFS and SMB. Cloud Volumes ONTAP is deployed and managed from the NetApp BlueXP™ control plane as a software-only solution; it runs on Amazon Elastic Compute Cloud (Amazon EC2 compute instances managing Amazon Elastic Block Store (EBS) storage. This capability enables you to build a virtual storage solution directly on Amazon resources.

Building your cloud storage environment on Cloud Volumes ONTAP provides advanced data management features. Cloud Volumes ONTAP allows you to provision both NAS and SAN storage for your application environment with SMB, NFS, iSCSI, and S3 support. You also get NetApp Snapshot™ technology that provides near-instantaneous point-in-time backup and recovery copies of your data without consuming additional storage resources or affecting your application performance.

In addition, you minimize your storage footprint and cloud resource spending with storage efficiency features such as data deduplication and data compression that act on your primary and secondary data. On top of all the local storage features, ONTAP provides NetApp SnapMirror® storage replication technology. SnapMirror brings your hybrid cloud together by tying your on-premises NetApp AFF and FAS to your Cloud Volumes ONTAP environment.

To address security concerns, Cloud Volumes ONTAP supports multiple methods for protecting your data. AWS storage encryption lets you take advantage of Amazon key management services. Cloud Volumes ONTAP provides

data encryption at the level of the storage volume. In addition, Autonomous Ransomware Protection (ARP) and WORM (write once, read many) part of NetApp® SnapLock® technology are supported.

NetApp BlueXP

For some enterprises, the cloud is a new environment. As you find ways to simplify your cloud resource usage, it's important to have tools to streamline the experience.

NetApp BlueXP addresses the disruption and complexity of managing data in on-premises, hybrid cloud, and multicloud environments by providing unified control of your storage and data services in your intelligent data infrastructure. With powerful AIOps, integrated data services, and flexible consumption of resources, BlueXP delivers the speed, simplicity, and security required to thrive in today's highly complex world.

BlueXP is a centralized management environment for all your ONTAP software-based storage systems across the hybrid cloud, including Cloud Volumes ONTAP, AFF, and FAS. Through automation and orchestration, BlueXP streamlines the deployment of Cloud Volumes ONTAP on top of AWS infrastructure.

BlueXP can automate your data movement to and from AWS. BlueXP integrates seamlessly with your cloud environment, so it can gather the resources you need to meet your storage requirements. With visibility into the resources consumed by each instance, BlueXP provides valuable feedback to administrators about the cost and utilization of resources over time. This information helps you decide when and where to move a workload if a change of resources is required to cost-optimize your environments.

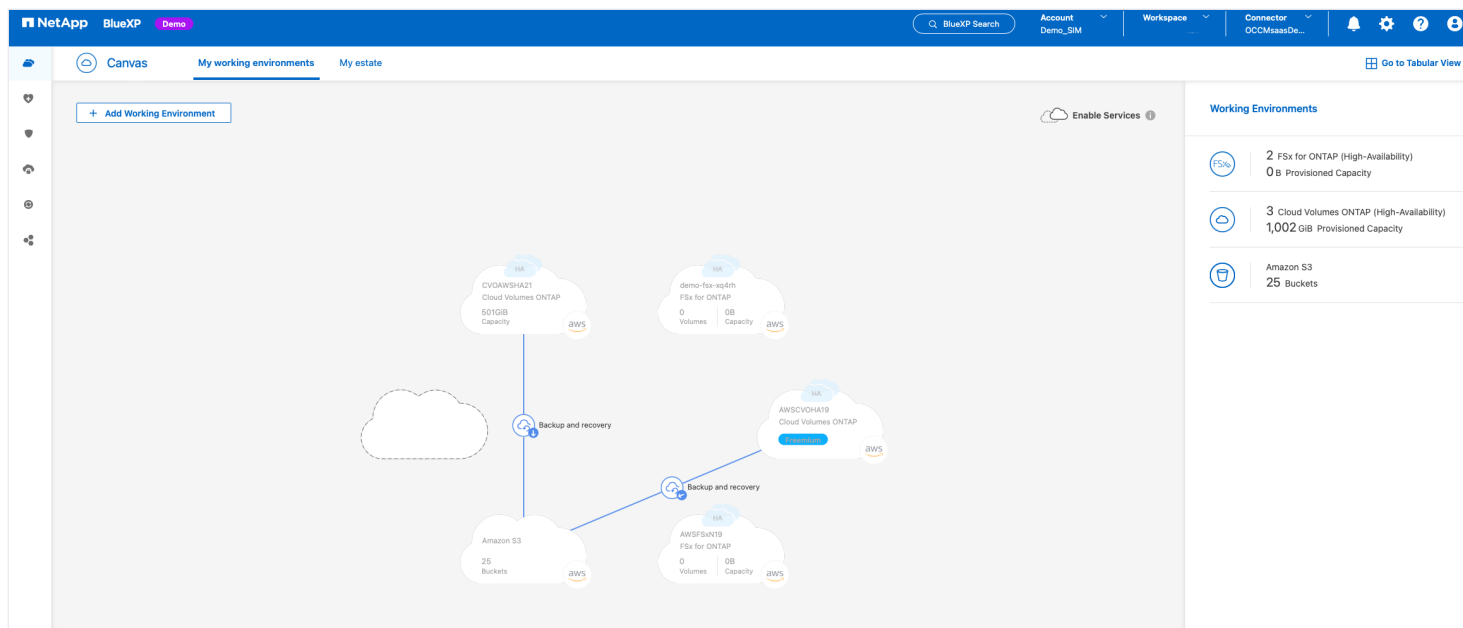


Figure 2: NetApp BlueXP.

BlueXP key features

BlueXP offers the following benefits:

- Simplifies configuration and deployment of Cloud Volumes ONTAP
- Provides a central point of control for all Cloud Volumes ONTAP instances
- Automates data movement between your premises and AWS environments
- Eases license and entitlement management
- Facilitates hybrid environments that include Cloud Volumes ONTAP, AFF, and FAS systems

Licensing

Cloud Volumes ONTAP uses a capacity-based license model that allows you to deploy and operate multiple instances and be charged based on usage. Multiple licensing packages are offered, providing cost optimization based on budget, performance, high availability, and backup functionality. Each package is priced on a GB/month basis.

- **Freemium:** All Cloud Volumes ONTAP functionality for an unlimited term, up to 500GiB
- **Essentials:** A flexible capacity-based license that can be configured as a single node or in an HA configuration for file and block primary workloads as well as a target for disaster recovery
- **Professional:** All the flexibility of Essentials with unlimited volume backups of Cloud Volumes ONTAP systems

More cloud data services, such as tiering, backup and recovery, and ransomware protection are available through BlueXP. Pricing for Cloud Volumes ONTAP and additional data services can be found at [BlueXP pricing page](#).

A truly consistent hybrid cloud

NetApp is the hybrid cloud leader that can help you reduce complexities, costs, and security risks across your on-premises and AWS environments.



Contact Us

About NetApp

NetApp is the intelligent data infrastructure company, combining unified data storage, integrated data services, and CloudOps solutions to turn a world of disruption into opportunity for every customer. NetApp creates silo-free infrastructure, harnessing observability and AI to enable the industry's best data management. As the only enterprise-grade storage service natively embedded in the world's biggest clouds, our data storage delivers seamless flexibility. In addition, our data services create a data advantage through superior cyber resilience, governance, and application agility. Our CloudOps solutions provide continuous optimization of performance and efficiency through observability and AI. No matter the data type, workload, or environment, with NetApp you can transform your data infrastructure to realize your business possibilities. www.netapp.com

