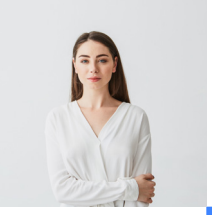
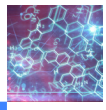
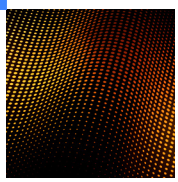
CASE STUDY

Cloud-Based Backup in Times of Disruption: How Cloud Volumes ONTAP Can Help

NetApp®







Introduction

Lockdown scenarios during times of disruption are particularly problematic for enterprises with legacy data protection and disaster recovery systems that require physical access to on-premises workspaces and data centers. At a time when operational and security risks may be even higher than usual due to an uptick in WFH (work from home) employees, there are far fewer IT personnel on site to monitor and service business-critical infrastructures.

This solution paper discusses how using NetApp® Cloud Volumes ONTAP as a cloud-based backup and archive solution buffers the enterprise from data protection and disaster recovery challenges during times of disruption. We'll take a look at one NetApp client that was able to quickly and effectively shift its legacy tape backup systems to Cloud Volumes ONTAP in a matter of days to maintain its business continuity and compliance during a time of great disruption and uncertainty.

The Challenges of Tape-Based Backup

WHAT IS TAPE BACKUP?

Magnetic tape data storage was once the most common way to store data. But as storage technology advanced, magnetic tape became impractical for use as primary storage and its use was relegated as a last resort for data recovery. There are still many enterprises that routinely use tape-based backups of their primary data storage nodes.

THE PHYSICAL ACCESS CHALLENGE

Magnetic tape technology has its drawbacks. Obviously, tape doesn't perform at the level that an all-flash SSD drive will. There is also a high degree of hands-on maintenance required to use them. IT personnel, sometimes in conjunction with a managed service provider, are responsible for maintaining the **tape backup servers**, including physically swapping out backup media. They must also ensure proper **tape backup storage** on-premises and often offsite as well. Recovery procedures, should they be necessary, also require physical access to the stored media.

Business continuity is always a critical issue, and perhaps even more so during periods of disruption and lockdown. At a time of restricted access to on-premises file share hosts and primary storage appliances, it is imperative that enterprises have offsite backup and recovery alternatives in place that are automatic, seamless, and able to be used without direct access to physical media.

An Alternative Approach: Cloud-Based Backup with Cloud Volumes ONTAP

Cloud-based backup is an excellent solution for addressing the risks of tape backup during times of disruption. The cloud service provider is responsible for the cloud backup storage infrastructure, while the **cloud data backups** themselves can be managed and monitored by remote.

On-premises storage customers can leverage Cloud Volumes ONTAP to complement native **cloud backup services**. Running as a virtual storage appliance on AWS, Azure, or Google Cloud Platform, Cloud Volumes ONTAP provides NetApp customers with enterprise-grade **cloud backup and recovery** that:

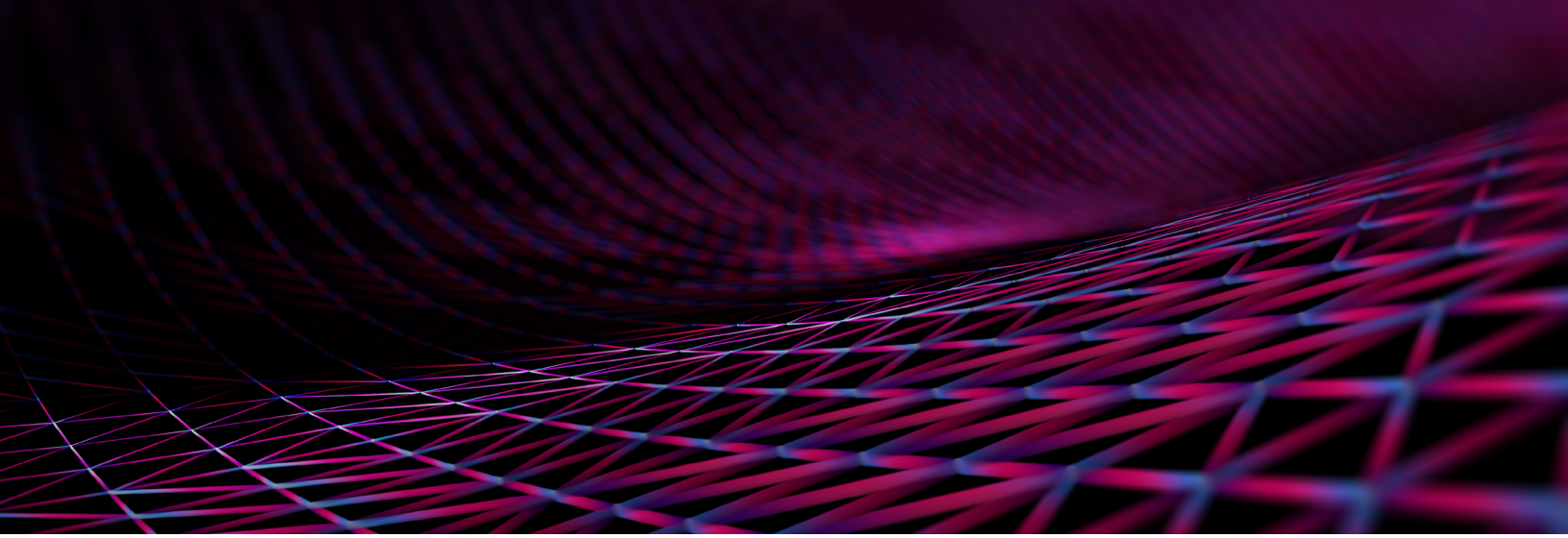
> Synchronizes data with highly available and cost-effective cloud object storage.

> Monitors sync relationships and status.

> Provides a single-pane, easy-to-use hybrid storage dashboard (NetApp Cloud Manager) for deploying, controlling and scheduling **cloud-based backup** and recovery.

Cloud Volumes ONTAP backup and recovery ensure that recovery operations happen automatically and efficiently by leveraging:

1. NetApp Snapshot™ technology for instant, point-in-time, low-storage-overhead data copies, regardless of the size of the source volume.
2. NetApp SnapMirror® data replication technology that keeps primary data sources and backup targets fully synchronized.
3. Efficient incremental synchronization.
4. Automated failover and failback processes.



Customer Case Study: Moving from Tape to Cloud-Based Backup During a Work Disruption

ABOUT THE CUSTOMER

This long-standing NetApp on-premises customer is an entertainment and media industry company with tens of thousands of hours of programming across all media, including films and TV.

Their on-premises NetApp NAS solution stores files from a number of business-critical departments and subsidiaries and these file shares are subject to stringent regulatory RPO and RTO requirements. Any disruption to their file share hosting services incurs significant business and compliance costs.

Their backup and recovery infrastructure is based on a legacy tape system that has third-party hardware dependencies in order to run specialized media workloads. Their physical tape library takes up considerable space and a lot of physical effort is required in handling tapes for disaster recovery.

BACKUP AND DR CHALLENGES

In general, the customer had been seeking a more efficient and flexible backup architecture that could improve their current RPO and RTO performance for critical data sets.

However, when a work disruption made it very difficult to physically access their data center, they were forced to seek an immediate solution that would provide an off-site and compliant backup environment for hundreds of terabytes of NetApp file share data.

HOW CLOUD VOLUMES ONTAP PROVIDED A SOLUTION

The customer identified Cloud Volumes ONTAP for AWS as the perfect offsite cloud-based backup solution for their NetApp file shares, and they were able to back up their data to the cloud with a simple process, using a familiar and trusted technology.

Using Cloud Manager the customer was able to quickly deploy several instances of Cloud Volumes ONTAP on AWS, with both performance (AWS EBS) and capacity (Amazon S3) storage tiers. Through a secure Direct Connect link, the customer uses SnapMirror to replicate its on-premises NAS file share nodes to Cloud Volumes ONTAP. Snapshot copies of well over a hundred volumes are retained for the required 30 days in a cold storage tier.

According to the automated failover and failback policies managed via Cloud Manager, the cloud data sets are shifted to performance storage tiers and become primary if a disaster occurs. After recovery, a reverse resync process updates the production data set before it becomes primary again, and the backup data set is shifted back to a capacity storage tier.

THE BENEFITS

The customer has reaped the following benefits from its cloud-based offsite backup solution using Cloud Volumes ONTAP on AWS:

1. **Automated, seamless DR**: Recovery begins without pressing a button.
2. **Quick deployment**: Their cloud-based backups were operational within days.
3. **No additional backup software required.**
4. **Improved recovery performance and flexibility**: RPO and RTO have been dramatically reduced.
5. **Reduction of on-premises footprint.**
6. **Optimization of cloud backup footprint and costs**: Reduced cloud backup footprint and costs with Cloud Volumes ONTAP's built-in storage efficiencies and automated data storage tiering.
7. **Cross region data protection**: The Cloud Volumes ONTAP deployment is easily distributed across multiple geographies and business units.

Conclusion

With far fewer personnel on site to monitor data centers and their systems, times of disruption can make enterprise IT operations tempting targets for external or internal cyber attackers, not to mention physical theft. Couple that risk with the fact that employee error or carelessness is the cause of 90% of corporate data breaches during the best of times, the makeshift WFH (work from home) operations that usually accompany lockdowns, and it's clear that extra precautions need to be put in place.

Cloud Volumes ONTAP provides an enterprise-grade, cost-effective cloud-based backup and recovery solution that can be a key component to a disaster recovery strategy when physical access to data centers is restricted.

Explore the benefits of Cloud Volumes ONTAP in a

30-day trial on AWS, Google Cloud, or Azure ›

Refer to the Interoperability Matrix Tool (IMT) on the NetApp Support site to validate that the exact product and feature versions described in this document are supported for your specific environment. The NetApp IMT defines the product components and versions that can be used to construct configurations that are supported by NetApp. Specific results depend on each customer's installation in accordance with published specifications.

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