

UNITY™ BACKUP SOLUTIONS

OVERVIEW

Backup is an essential part of an organization's overall data management strategy. It is clear that the ability to store and access data is not sufficient, and that maintaining consistent copies of data over time and being able to access it at any time, is important. This accessibility allows the retrieval to the state of data at an earlier point in time or allows restoration due to data loss within the primary storage layer. The 3-2-1 rule is a widely adopted strategy for data management, which recommends the maintenance of 3 copies of your data, 2 copies on different media and 1 offsite or immutable copy. The focus of this brief is backup storage solutions.

BACKUP TARGET REQUIREMENTS

Versatile and Efficient Data Ingest and Recovery

A backup destination must be capable of integrating into any backup solution and ingesting and recovering data with multiple GB/s of throughput. This enables plug-n-play deployment, scaling to multiple backup clients and the ability to quickly access backups when desired.

Capacity and Scale

Backup capacity requirements are typically sized to be multiples of the size of the amount of source data. This allows a user to maintain several full backups and incremental backups only constrained by backup storage capacity. A backup destination therefore needs to be able to scale to PBs and more.

Integrity and Availability

Storage media has finite endurance. A backup target, like any primary storage solution, should provide the ability to tolerate storage media failure and keep backed up data readily available.

Low TCO

Backup storage isn't primary storage. The purpose of backup storage is to ingest and retain vast amounts of data. Access is only needed when primary data is not accessible, or when an earlier point-in-time backup is needed. Such a layer needs to be extremely dense and cost-effective.

Security

Not all backups are equal. Some backups are considered "high-value". Examples include backups of data that are absolutely essential to the functioning of a business - data that one cannot afford to lose due to cyberattacks, malware, ransomware, or even human errors.

NEXSAN UNITY BACKUP STORAGE SOLUTIONS

The Unity™ series of storage solutions supports block and file access protocols allowing it to integrate easily into any backup solution. Advanced FASTier™ caching techniques enable high throughput making it capable of supporting multiple concurrent ingest streams and efficient restores when required.

By supporting several drive options (HDDs and SSDs) and expansion options, the Unity starts at low tens of terabytes (TB) of usable capacity and easily scales up to nearly several petabytes (PB) within a standard rack. This allows the growth of backup storage needs to align with the growth of data.

Data integrity and availability are key features of the Unity array. Policy-driven and scheduled data integrity checks scrub the data for faults, and auto-heal the data without any user intervention. Dual controllers and RAID-based protection guarantee data access in the event of component failure. The replication capabilities enable an additional copy of backups on a different site to protect against site failure. Together, these make the Unity a robust backup storage solution.

Unbreakable Backup

While the above capabilities combined make the Unity a very compelling backup target, it goes well-beyond normal backup use cases by providing an option to upgrade its file backup capabilities to an extremely secure, immutable Unbreakable Backup solution. By deploying the Assureon®, active data vault with the Unity, data can be protected from malware, ransomware, cyberattacks, hardware failures and more.

Assureon® is an immutable WORM solution with rigorous data integrity checks. It implements file locking, with restricted access controls, and stores at least two copies of the backup. Assureon provides independent self-healing capabilities and is completely policy-based with no other access mechanisms. The result is a completely secure, locked down, immutable, and Unbreakable Backup layer. Even administrators cannot tamper with locked down data in this layer - until the expiration of the policy that governs the secure backup. Such a solution ensures protection from data corruption and data loss. This solution guarantees data availability under the most trying conditions, even if the entire primary and backup deployments are compromised.

An additional advantage is that the Assureon provides the user an option to implement a tiered backup solution. The same backup can be maintained on a faster Unity tier and a secure Assureon tier for a chosen period of time. This enables fast restores in normal backup/restore scenarios. If backup tier capacity is a concern, shortcuts can be created for older file backups. This frees up capacity on the Unity while keeping the locked down, immutable backups on the Assureon readily available for access whenever needed, such as in the event of complete data loss.

UNITY-BASED BACKUP SOLUTIONS

1. Backup

In this solution, the Unity is a simple backup destination.



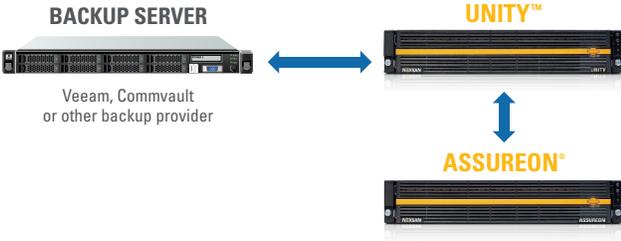
2. Replicated Backup

In this solution, the Unity replicates its backups to another Unity (usually at a different site). Alternatively, a backup solution can replicate to both Unity systems.



3. Unbreakable, Tiered Backup

The Unbreakable Backup provides an immutable WORM layer to protect the backups from malware and ransomware attacks that are increasingly targeting backups for deletion or encryption. Full copies of file backups can reside on both the Unity and the Assureon. If Unity capacity is a factor, and flexibility in access times are acceptable, shortcuts reside on the Unity to free up Unity capacity, while full copies reside on the Assureon.

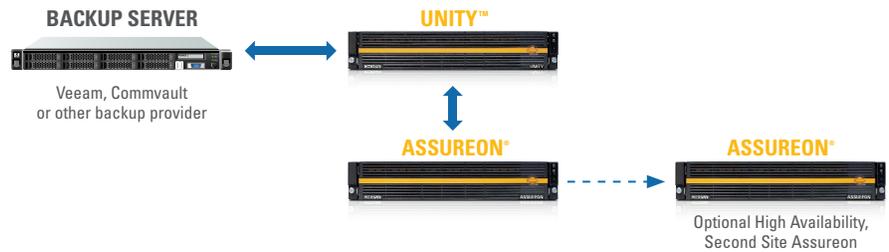


ABOUT NEXSAN

Nexsan® is a global enterprise storage leader since 1999 delivering the most reliable, cost-effective and highly efficient storage solutions. Nexsan's solution portfolio empowers enterprises to securely store, protect and manage valuable business data with a broad product line of all-flash NVMe, unified storage, block storage, and secure archiving. Nexsan is a proud member of the StorCentric Family. www.nexsan.com

4. Unbreakable, Tiered, Replicated Backup

This solution adds an additional Assureon at a different site. Bi-directional replication between the two Assureon systems maintains an off-site copy and enables recovery in the event of site failure. Unity access to the surviving Assureon is required for recovery in the event of a site failure.



5. Replicated and Highly Available Tiered Unbreakable Backup

In this solution, the Unbreakable Backup solution is highly available using an additional Unity at a second site. There are four deployment options:

- Unity replication. This adds Assureon systems to both sites with a Simple Replicated Backup solution.
- Assureon replication. This adds a "standby Unity" to the replicated Unbreakable Backup solution, at the second site. The standby Unity can be hydrated with data protected by the Assureon from the second site.
- Backup application replication. Deploy Unity + Assureon Unbreakable Backup at both sites and the backup application replicates to both sites.
- Multi-site Environment (depicted below). In this scenario, Unity systems are placed at remote office sites where all data is securely replicated back to primary data center. This ensures that customers with multiple locations can decrease the size of their backup footprint and have standardization among their chosen backup software provider.

