NEXSAN

CAPTURE AND PROTECT YOUR CLOUD DATA WITH ASSUREON® CLOUD TRANSFER™

Assureon Cloud Transfer™ (ACT) allows you to securely archive your unstructured cloud data to an on premise Assureon® archive while simultaneously providing file integrity and trustworthy data retention policies. ACT optimizes cloud storage by automatically migrating cold files to an inexpensive on-premises active archive, while providing protection against ransomware and unauthorized or accidental deletion or modification of your data. ACT enables the reliable sharing of archived data between multiple cloud and on–premises clients.

OVERVIEW

If you are like most cloud users, you are finding that more and more unstructured data is accumulating in your infrastructure, and it's getting harder and more expensive to protect it adequately. You may also have a large amount of on-premises reference data which needs to be accessible from cloud servers but are concerned with the risk and performance challenges that come from opening a file share across an internet connection. Nexsan's new Assureon Cloud Transfer™ capability can address these needs while providing powerful data protection and integrity features.

THE CHALLENGES

While it is very easy to allocate cloud server instances with native filesystems and run traditional business applications on them, you must also create and manage a data protection strategy which adds cost and complexity to an already costly implementation. One alternative might be to re-write applications around object storage services provided by a cloud vendor, but this can be time consuming and lead to performance bottlenecks. Other challenges include:

- Data protection against hacks and software errors
- Ransomware defense
- Cloud lock-in
- Migration of data to or from the cloud
- Sharing data between cloud and on-premises application servers
- Validation of data at rest
- Validation of data in transit
- Constantly increasing cloud costs as unstructured data accumulates

THE SOLUTION

Assureon Cloud Transfer addresses these challenges and more, by capturing a copy of unstructured content as it is created on Windows servers in Amazon AWS or Microsoft Azure clouds and archiving a secure copy to an on-premises Assureon active archive.

Policies defined by the administrator are assigned to each file upon creation. Policies include the desired minimum retention time as well as the option to convert files into software transparent *stubs* after a defined period of inactivity. Stubs not only take up much less disk space than typical unstructured content, but can also be synchronized very rapidly with other cloud or on-premises server instances. This provides a fast and highly reliable mechanism for sharing or migrating data between cloud and on-premises server clients. When a stub is accessed, data is pulled automatically from the on-premises Assureon system and cached locally. At any time, some or all of the files may be pushed in their entirety to any or all of the clients.

Converting cold data to stubs optimizes the use of cloud resources, not only in the reduction of direct storage costs, but also in the indirect costs of backup licensing and storage. The backup problem is greatly reduced by eliminating the need to process unchanged data, but also by taming the growth of expensive tiers of storage as the vast majority of growth in capacity is caused by the accumulation of unstructured content.

PRIVATE BLOCKCHAIN

Assureon applies a globally-unique serial number to each file, calculates a pair of cryptographic hashes, assigns a unique AES256 encryption key if desired, and stores this and other metadata in a cryptographically chained linked list (today known as a "Private Blockchain") prior to replicating to a redundant Assureon appliance in a second location. Approximately every 90 days, Assureon provides an automatic integrity audit at both redundant sites, where it walks the serial number list making sure that every stored file exists, is readable, and still matches its separately stored hashes. Any corrupted or missing files are quarantined and automatically self-healed from a known good copy in the partner system.

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 unified storage, block storage, and secure archiving. www.nexsan.com.

Since Assureon will not delete or modify a file contrary to its assigned retention policy, it provides a hardened archive copy that can be thought of as a Virtual Air Gap – a comforting safety measure that protects against failure of your cloud's security.
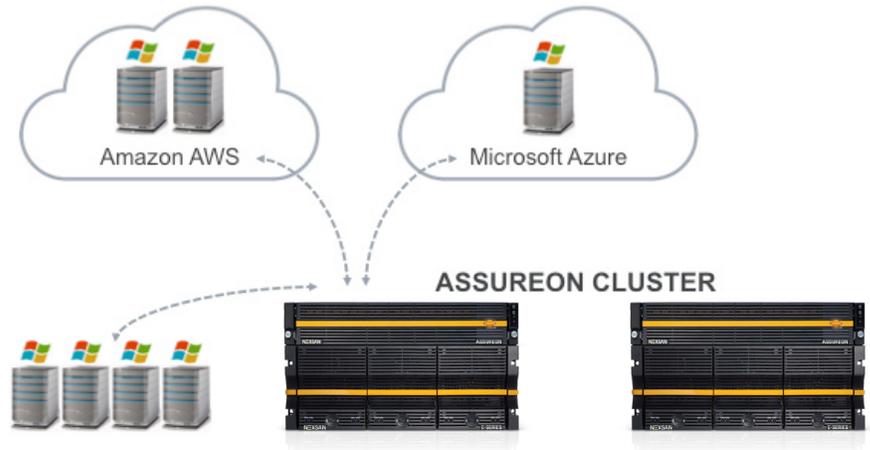
USE CASES

You may have Windows production servers in the cloud that have important unstructured content such as document scans, images, videos, and PDFs and wish to capture a copy and bring them in-house to an on-premises archive. This might be because of a data sovereignty policy or to make it easier to run analysis from local systems, for better responsiveness to power users, or simply because you prefer the extra security of knowing that no matter what happens in the cloud you have a safety copy in your possession.

You may have a further requirement to tame the growth of unstructured content in Windows filesystems and find that converting less-used documents to software transparent stubs that link to your significantly less expensive on-premises Assureon storage. This has the further benefit of reducing the complexity of the cloud backup problem as you only have to worry about the relatively small capacity used by applications and local databases. Restores are also a breeze as it's possible to get back in production rapidly after a disaster by simply uploading all the stub files, and if desired, inflating them later after the emergency has passed. Assureon Cloud Transfer also provides an easy way to keep the stubs and files synchronized between cloud and on-prem servers.

Opposite use cases are also very common, where you have a large amount of data on-premises, and wish to make it visible to server instances in the cloud by either uploading the stub files, and possibly uploading a selective subset of the full files. Over time, more information could be relocated to the cloud should the need arise or if a gradual migration is the desired outcome.

In all such applications, Assureon Cloud Transfer performs these tasks with a high degree of integrity and protection against malware and other threats to your data.