

ASSUREONTM

Scalable Secure Storage Appliance

DELIVERING

- A secure disk storage appliance for the long term retention and management of fixed content information.
- Multiple layers of Security and Data Protection by employing secure AES encryption, stringent accessibility, and a high-availability clustered hardware architecture.
- A fully integrated and complete hardware / software solution.
- A highly scalable system – performance and capacity scale independently.
- Support for offline media such as tape and optical.
- Compliance with the major regulations affecting records management, (SEC 17-4, HIPAA, CFR 21 part 11 FDA, Sarbanes-Oxley, PIPEDA of Canada, UK Data Protection Act, etc).
- Fail-safe technology to maintain the authenticity and integrity of content while assuring no loss of data.
 - Reduced Storage Costs:
 - Enabling the implementation of Information Lifecycle Management processes.
 - Self-management and self-configuration capabilities decrease the personnel requirements needed to manage large amounts of information.
 - Assureon's CAS technology eliminates multiple copies of the same file.
- Self-diagnostic and self-healing capabilities assures the safety of the information; absolute redundancy, no single point of failure, ongoing data integrity checking with self healing capabilities, RAID protection and phone home capability.

Information
for Life.



Nexsan's Assureon™ is a secure networked storage system designed and architected to store, manage, protect, dispose of, and provide fast, easy access to fixed content and reference data in a cost-effective manner. Data within an organization falls into two categories; dynamic - which is typically held in databases and subject to constant change, and static - which is reference or fixed content data, that changes infrequently and typically has a long life and high value. Reference data takes many forms, such as, business reports, financial papers, contracts, employee information, medical records, X-rays, e-mail, check images, surveillance video, websites, recordings, broadcast content, etc.

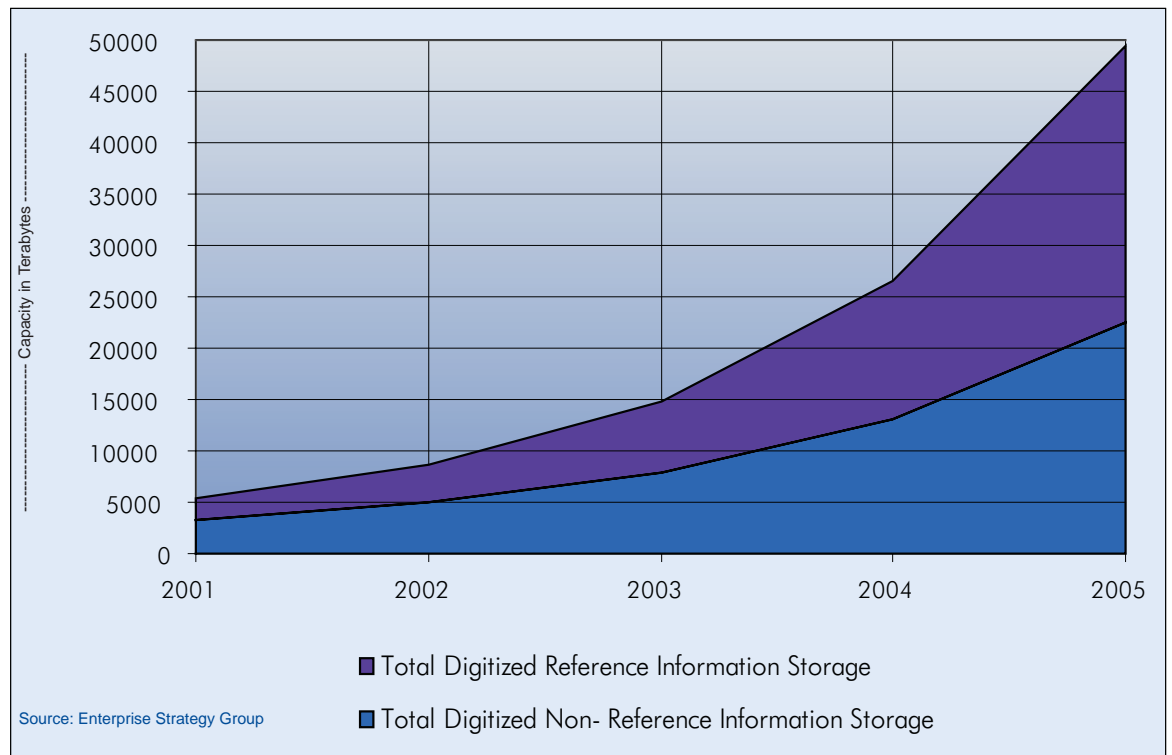
Numerous studies by industry analysts agree that reference data is the fastest growing segment of the storage market. The Enterprise Strategy Group (formerly Enterprise Storage Group) predicted fixed content/reference data growing at a compound annual rate of ninety-two percent through 2005 in their research report, *The Next Wave: A Snapshot*. Existing storage architectures are not optimized for the unique conditions and requirements reference data demands, and the scalability necessary to handle this phenomenal growth.

Assureon is the solution for organizations that are faced with the challenge of protecting and storing an ever increasing amount of reference information and want to do so in a cost-effective way. Assureon simplifies and reduces the personnel and management costs associated with the long-term retention of reference information.

Assureon is for businesses that need to comply with the more stringently enforced existing regulations or new laws addressing the protection, management and disposition of information. Assureon enables business practices that reduce the risks associated with electronic discovery requests and potential litigation.

The unprecedented flexibility and security of Assureon empowers organizations that are implementing corporate governance practices for the long term management of their digital assets. There are significant TCO (Total Cost of Ownership) savings to be made within every business when using highly managed "hardened" information storage as provided by Assureon.

INFORMATION STORAGE TREND



NEXSAN ASSUREON: THE NEXT GENERATION OF CAS SOLUTIONS

Assureon is based upon a combination of CAS (Content Addressable Storage) with advanced 256-bit encryption and other security and data protection technologies. CAS technology produces a unique file identifier for all objects, based on their content. Assureon's object storage model stores files, images, recordings, web pages, etc. as objects with a unique universal identifier. This approach differs from traditional file system models, where an application or user names the file and then places it in a hierarchical file system. Traditional file system models suffer from a lack of scalability and a high management cost.

In an object model, the archived physical object is completely separate from the logical location or application. Administrators can be relieved of performing typical storage housekeeping tasks, such as formatting file systems, creating volumes and binding LUNs (logical unit numbers).

Assureon offers these valuable benefits:

- **Single Instance Store:** Assureon's CAS technology enables single instance store, whereby only one copy of a data object is kept. Assureon will identify duplicate objects based on their CAS address and store only one copy, resulting in less storage needed, reduced network bandwidth and less overall cost.
- **Authentication and Integrity:** Assureon technology verifies and reports that all assets and asset metadata has not been tampered with or corrupted.
- **Immutability:** An object placed under Assureon management cannot be changed or erased until the end of its retention period.
- **WORM functionality:** The Assureon system provides Write Once, Read Many functionality
- **Access Speed:** Assureon enables immediate online access to reference data as opposed to traditional offline storage.
- **Information Assurance:** Assureon technology ensures that information is authentic, available where and when needed, and accessed only as authorized.
- **File Level Retention Enforcement:** Assureon enforces retention policies at the object level allowing different retention periods to be placed on files based upon their importance to an organization.
- **Assignment of Retention Periods:** Assureon will assign a retention period based either upon a 3rd party application (ex. Document management system or an email management package) or Assureon can place the appropriate retention policy based upon its own file watcher program.
- **Audit Trails for Compliance:** Assureon meets many requirements of the numerous compliance laws and privacy regulations including:
 - Digital Time Stamped Records - a requirement of FDA regulations
 - Serialization - a requirement of SEC regulations.
 - User Access Trail - a requirement of HIPAA
- **Military-strength deletion / disposition:** At the end of a retention period objects are scrubbed through an automated seven step process once authorized by the appropriate administrator. Additionally, the keys to deleted encrypted data will be "scrubbed" providing a "double" delete function.
- **Security and Data Protection:** 256-bit AES encryption can be placed on all or selected assets under Assureon's management. Tamper-proof time stamping of assets adds an additional layer of security.
- **Business Continuity Protection:** Assureon supports remote replication of assets across the WAN and can be configured to keep duplicate files at a remote site.

- **Media Independence:** In addition to disk, Assureon supports offline media such as tape and optical allowing user's to benefit not only from the high level of security provided by the encryption on their tapes, but also from the CAS single instance store technology, which reduces storage consumption and costs.
- **Selective Disposition on Offline Media:** Until now, objects backed up to offline media such as tape or optical disk have been impossible to delete at the individual file level. Assureon delivers higher levels of security by providing crypto deletion of these files. At the end of a retention period or as authorized in the event of a security breach or attack, Assureon will scrub encrypted files online as well their associated encryption keys which are stored in multiple, redundant locations. Once a key is destroyed, the file information, either online or on removable media, cannot be read.
- **Enabling Information Lifecycle Management (ILM):** Assureon is a powerful tool that automates the operational steps (Classify, Place, Protect, Archive, Access, Expire) of the lifecycle process for reference data within an organization.
- **Fail-safe CAS Technology:** Assureon utilizes a dual cryptographic process (hashing algorithm) to create its unique CAS address, which ensures the integrity of the file and no loss of information through potential data collisions.
- **Self-Diagnostic & Repair:** Assureon regularly validates the integrity of the files under management by scanning them and comparing their current unique identifiers with the original ones. If a discrepancy is detected, Assureon will generate an error message, log the error and automatically replace the file using the mirrored copy that it has under management.
- **Searching and Accessing:** Assureon provides a searchable database of the file's metadata to assist in locating files. Long term system access is supported through Assureon's fully automatic key management.
- **Fault Tolerant:** Single and multiple failures can be tolerated without data loss or loss of data access. If a node fails, processing is redirected to another node. If a storage location is unavailable, it is redirected to the secondary and tertiary locations. If all locations become unavailable, Assureon journals the new files and metadata until a location becomes available.
- **Scaleable & Load Balancing:** The architecture of Assureon allows you to independently add processing power for performance or add more storage capacity. Assureon automatically identifies the additional nodes or storage, and balances the load for maximum throughput automatically.
- **Ultimate D2D:** Assureon takes D2D and disk based archiving to the next level, including support for mobile computers and branch offices.

ASSUREON™

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