

maintain data compliance

security & protection

save energy costs

non-disruptive growth

preserve data accurately

investment protection

reduce backup windows

decrease overhead costs

reduce storage costs

extensibility

prevent unauthorized data access

prevent data loss

randomly access data



DATA PROTECTION STRATEGIES for BUSINESS SUCCESS



randomly access data

The Value of Data

In today's marketplace, data offers a competitive edge, increasing shareholder value and enabling quick response to new opportunities. That same data improves customer service, helps solve crimes, saves patient's lives, facilitates resolution of legal issues, and more. For those reasons, most businesses and organizations regard data as a valuable digital asset. Consequently, managing, affordably storing, and preserving data has become increasingly important.

Do you have a strategy for preserving data critical to your business or organization?

Why You Need to Archive

There are many reasons to implement a professional archiving solution regardless of your industry or business size. Motivation varies depending upon the nature of the business and need for the data.

Whether your objective is to preserve data or images unaltered, comply with industry regulations, wrap some control around big data, or secure data from unauthorized access, you need an archiving solution with worry-free operation that solves your business problems...all of them. Archiving data provides the insurance and confidence you need to be sure that your data will still be there in its unaltered form when needed.

The need for archiving is not dependent upon the size of business but rather the importance of the data to continued operations of the business. Whether small or large, organizations today face many unique challenges when it comes to storage of data.

The Challenge of Compliance

Managing data compliance is a continuous challenge for corporations and associated IT departments. Further complicated by industry and government regulations, requirements vary as they apply to individual procedures and processes. Risks associated with potential security and privacy concerns are a high priority due to the potential litigation costs and steep penalties levied for breach.

Regulations may require specific treatment of information such as retention duration, storage methods, and control. Financial institutions encounter an increasing number of global regulations mandating differing policies. Governments worldwide encounter regulatory agencies at state, federal, and local levels. Healthcare providers must ensure the confidentiality and security of healthcare records. Examples include: Sarbanes-Oxley (SOX), Federal Information Security Management Act (FISMA), HIPPA/HITECH and more.

All of these factors contribute to the size of archive required for current archiving objectives while maintaining a strategy for future extensibility.

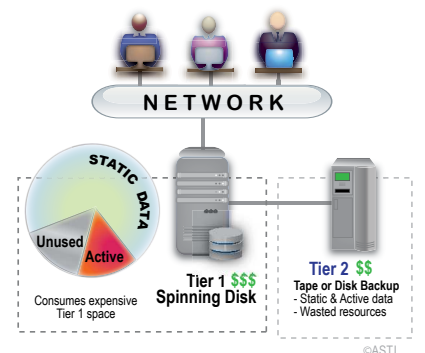
Dedicated Archiving Tier Enhances Storage Infrastructures

Over 80% of business data is rarely accessed and typically has high overhead costs associated with maintaining and backing up the data. Over time, the data becomes inactive, then rarely accessed even though stored on expensive Tier 1 spinning disks or tape. That static, or cold data, may be costing your business more than you realize with the soaring costs of electricity, environmental conditioning, frequent data migrations, backups, technology refresh, and more; hence, the importance of archiving data professionally.

Implementing a dedicated archive tier within the storage infrastructure is an effective strategy for improving operations and reducing costs. The Tier 3 archive enables efficient, cost effective retention of static data while freeing up valuable space on expensive Tier 1 storage and reducing the need for continuous capacity expansions.

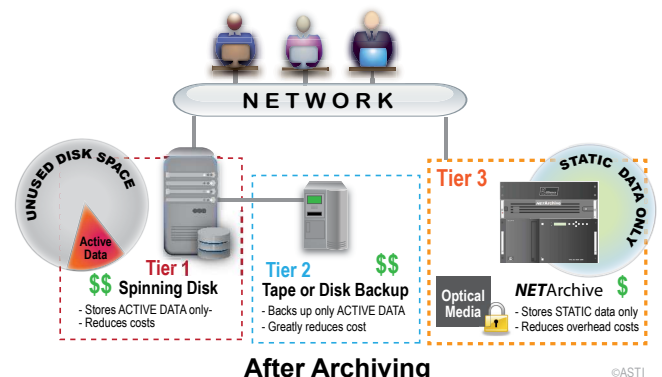
Before Archiving:

- High-cost of maintaining data on Tier 1 disk
- Static data consumes valuable disk space
- Backups are time consuming
- Wastes valuable resources



After Implementing a Tier 3 Archive:

- Implements a tiered storage strategy
- Lowest possible TCO with affordable archive storage
- Dedicated to storing Static data only
- Reclaims valuable Tier 1 space for Active data
- Reduces backup windows & associated resources
- Improves overall efficiencies of IT operations



ASTI's Data Protection Strategy is Key to Success

Multifaceted Data Security with Controlled Access

ASTI systems secure your archive data using a multi-layered approach with standard security protections topped by unquestioned record authenticity:

- Prevent unauthorized access with support for multiple industry-standard authentication services: Windows Active Directory, Local User Level security, or LDAP
- Encrypted data transmission to offsite replicated systems
- Record authenticity with true Write-Once-Read-Many (WORM) optical media
- Unmatched data retention with > 100 year media life expectancy
- On top of an already secure system, add the insurance of optional encryption and achieve the highest degree of data protection for: all removable media: online/nearline, offline (whether local or offsite), disaster recovery copies (in transit, locally, or offsite), data stored on cloud (during transmission or at rest).

Clear Cut Administration and Automation

ASTI solutions eliminate operational complexities through powerful configurable policy-based controls that enable administrators to create multiple archives by organizational need. Key features such as thin provisioning of files stored on media and cloud, customized RAID caching based on archive access patterns, random access to files, search capabilities, and more, facilitate the archiving process. Abundant RAID cache streamlines access to most recently cached data enabling immediate response to requests for data or eDiscovery.

Simplified Operation

With simple plug and play connectivity and easy system setup, the system simplifies IT operations through proactive monitoring and centralized management via a single web-based interface. The set-it-once and monitor-thereafter solution scales as data archives increase providing non-disruptive growth and reducing departmental expenditures. Through seamless integration with existing storage infrastructures, archives appear as just another network drive enabling transparent user and application access.

Reduced Costs & Investment Protection

ASTI solutions offer the lowest possible total cost of ownership of any archiving solution available. Optical technology by nature is green as it no longer requires a constant power source to maintain the data. Additionally, optical eliminates the need for periodic replacement or maintenance and reduces costly migrations and technology refreshes typically associated with other storage mediums. Elastic system scalability, expandability to the Cloud and designed-in disaster recovery solutions reduce operating costs and extend solution investments.

Compliance with Industry and Government Regulations

Offering the highest level of data protection available, ASTI solutions enable organizations to achieve data compliance easily while minimizing risks and penalties. Configurable policies and customizable archives within the data management system are adaptable to the varying retention and duration controls required by rigid mandates. True Write-Once-Read-Many optical media preserves data unaltered for required periods up to 100 years and beyond, protecting against data loss. Data encryption offers true breach protection enabling compliance with the explicit requirements of HITECH (and other regulations), minimizing business risks.

Cloud-Integrated Storage

Cloud-Integrated Storage blends ASTI's compliant archive storage technologies with the reliability, availability, and utility of the cloud. Seamlessly write data to cloud and/or optical archives, depending on archive data and disaster recovery requirements. Access, manage, and view all data anywhere within the archiving ecosystem as part of regular IT operations with onboard-integrated data management.

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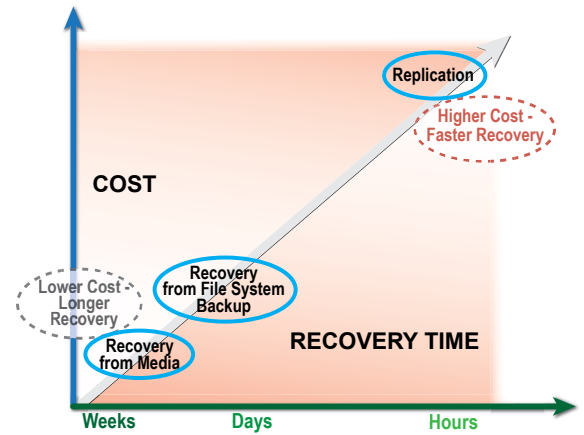


Business Continuity

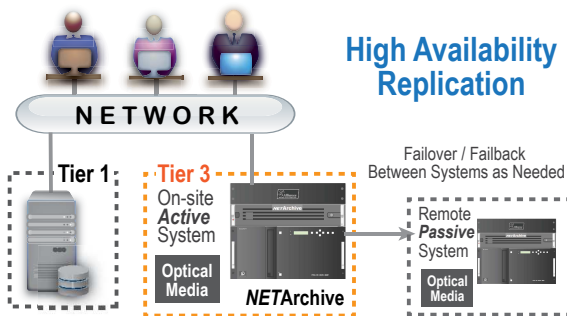
In the event of a disaster, can you continue business operations without accessing valuable data assets? ASTI data archiving solutions may not be able to prevent natural or human caused disasters, but they do provide multiple ways to protect data and get businesses back up and running after or during a disaster. Every business or organization has its own recovery time objectives (RTO) depending upon value of data to the enterprise and hours of operation. Businesses that operate globally on a 24 x7 basis may need immediate access to data while other businesses may have more moderate requirements.

Business continuity planning is a necessity in order to determine the criticality of data to ongoing business operations. Developing a business continuity plan requires careful examination of applications and services in order to ascertain RTO and RPO objectives:

- RTO – Recovery Time Objective is the time to restore the data
- RPO – Recovery Point Objective RPO defines the minimally acceptable period of data loss in the event of a disaster-failover scenario. This can be from zero to minutes, or hours, depending on the criticality of the data



**Disaster Recovery Requirements:
Method vs Cost & Recovery Time**



Replication for High Availability

When immediate data access is required after a disruptive incident, Replication ensures a much faster recovery. Data is replicated between geographically dispersed redundant libraries providing customers with a fully redundant offsite archive, greatly improving recovery time and recovery point objectives. The secondary mirrored system is on standby and can failover (or failback) to become the primary system when needed, simultaneously providing a high-availability recovery point and a centralized corporate digital assets repository.

Disaster Recovery

Differentiated by a designed-in, affordable disaster recovery solution, ASTI's data archiving solutions are unmatched by other technologies. A simple setting within the application enables the library to automatically create duplicate (or multiple) copies of the removable true WORM media that can be stored in a secure remote vault as an offsite copy of last resort. The preserved, unaltered data is then readily available should it be needed in the presence of a disaster. All archived data stored on ASTI archiving solutions can be restored from archive media or built-in system backups providing 100% data recovery.

ASTI advocates following storage industry 3-2-1 Archiving and Data Protection Best Practices that recommend keeping 3 copies of data, on 2 different types of media (fulfilled by cloud or optical), with at least 1 copy of the data stored off-site remotely or on removable media (cloud or optical) for disaster recovery purposes.

Contact ASTI to learn more about data archiving options.



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