



Solutions

Integrated Storage
Appliances

Management

Optimized Storage
& Migration

Archive

Data Retention
& Compliance

Services

Global Installation
& Support

SECURING THE FUTURE OF YOUR DATA®

www.qstar.com

For more than 20 years QStar has delivered enterprise class archival storage and data management solutions to customers around the world. QStar consistently meets increasingly sophisticated requirements with an industry leading technology platform, which has the capability and flexibility to meet the demands of today's challenging business climate.

QStar's storage solutions are part of a complete archive and data management platform that is hardware, system and data independent. This unique architectural approach enables customers to optimize their existing IT infrastructure while minimizing disruption and capital expense. With thousands of customers across a wide range of industries, QStar provides corporations, government agencies, and medical facilities with the strategies and solutions to manage a changing technology landscape while protecting their valuable digital assets for the future.

Solution Summary

► QStar Appliance Solutions

The Sntry series of solutions are network attached appliances designed for specific storage applications. Using QStar's field proven software platform, the Sntry solutions are simple to deploy and manage, highly scalable, and optimized for maximum performance.

Solution	Application	Supported Hardware
<ul style="list-style-type: none"> ● SntrySTR ● SntrySTR Xpress ● SntryML ● SntryVTL 	<ul style="list-style-type: none"> ● Enterprise Storage Management ● SMB Storage Management ● Email Archiving ● Backup Tape Virtualization 	<ul style="list-style-type: none"> ● RAID, Optical, Tape, CAS ● RAID, Blu-ray ● RAID, Optical, Tape, CAS ● RAID

► QStar Software Products

QStar's software products provide a rich set of data and storage resource management functionality. These products can be deployed as independent applications or can be added incrementally to an existing platform installation. Advanced functionality includes real time mirroring for disaster prevention, and content lifecycle management through policy based server/client data migration

Archive Management	Application	Description
<ul style="list-style-type: none"> ● HSM ● Data Director ● SDJ / STJ ● Network Mlgrator 	<ul style="list-style-type: none"> ● Enterprise Storage Management ● Mirrored Disaster Prevention ● Mirrored Archive Performance ● Policy Based Data Migration 	<ul style="list-style-type: none"> ● Available on Windows, Linux, Unix, Mac OS ● Extension to HSM, SntrySTR ● Extension to HSM, SntrySTR ● Standalone or extension to HSM, SntrySTR
Publishing & Mastering <ul style="list-style-type: none"> ● Master ● Publisher Archive 	<ul style="list-style-type: none"> ● Optical Archive and Mastering ● Optical Archive and Publication 	<ul style="list-style-type: none"> ● Supports DVD and CD libraries ● Supports all leading publication / duplication systems



3-2-1 Archiving and Data Protection Best Practice

An archive doesn't have to be complex and disruptive. The 3-2-1 Best Practice is a simple design and deployment strategy that enables a highly resilient archive, while reducing acquisition and operating costs through improved resource optimization.

The 3-2-1 Best Practice advocates the retention of at least 3 copies of all critical business data, these copies should be kept on 2 different types of storage media, and at least 1 copy should be offsite on removable media. When combined with an enterprise QStar storage platform, the 3-2-1 framework creates a very cost effective, robust, and efficient archive and data management solution.

3-2-1 Archive Benefits

- Delivers robust availability for archive data
- Slows the demand for IT capital acquisition
- Optimizes the use of existing IT infrastructure
- Eliminates backup overhead for archive data
- Reduces dependence on technology vendors
- Lowers power consumption and carbon footprint
- Creates a foundation for regulatory compliance



To learn more about the 3-2-1 best practice visit www.qstar.com/321_bestpractice.html

QStar Appliance Solutions

QStar's Sntry series of storage solutions are based on a tightly integrated appliance architecture that eliminates complexity and reduces administration, while ensuring maximum system performance. With each appliance optimized for a specific storage application and budget, the Sntry series solutions can meet virtually any archival storage and data management requirement

SntrySTR®



Built for demanding data center environments, SntrySTR is a complete network attached archive appliance that manages the lifecycle of data across multiple storage levels. SntrySTR provides the foundation for a resilient 3-2-1 archive strategy by combining fast RAID backed by a secure optical, tape or CAS archive and complete offline media management. No other archive solution on the market supports the same range of storage devices, providing long term hardware independence.

SntrySTR is designed to keep pace with a growing archive through non-disruptive incremental expansion from a few terabytes to petabytes. The use of optical and tape technology in combination with optional encryption and digital signature features delivers the data security, authenticity and longevity essential to any archive. SntrySTR also supports green data center initiatives through the use of efficient automated libraries, dramatically reducing power consumption and cooling costs.

Advanced mirroring and data migration functionality are tightly integrated options within the SntrySTR platform. Data Director and Network Migrator capabilities can be quickly deployed as greater levels of disaster prevention and remote data management are required. SntrySTR provides a very cost effective archive solution with the performance, resilience and longevity essential for demanding professional archive environments.

SntrySTR Headline Features

- Simple plug and play appliance design
- Automated data lifecycle management
- Online and offline automated storage management
- Highly scalable capacity and functionality
- Storage hardware independent platform architecture
- Optional encryption and digital signature data security
- Mirroring and data replication options



SntrySTR Xpress™

The SntrySTR Xpress leverages the strengths of the enterprise SntrySTR in a configuration specifically designed to meet the requirements and budget of a smaller organization. The Xpress is a network attached appliance that requires no special IT resource to install and manage. All archive data resides on fast RAID storage with copies automatically written to Blu-ray optical media for secure offline retention.

SNTRYSTR XPRESS™

The multi-level storage architecture of the Xpress provides smaller organizations with the benefits of professional archive management in a low cost desktop solution. The Xpress comes fully configured with either 500GB, 1TB or 2TB of RAID protected online storage and an integrated Blu-ray disc recorder to create secure offline copies of the entire archive.

The SntrySTR Xpress delivers excellent investment protection. As the need for capacity and archive sophistication increases, the Xpress can be upgraded to an enterprise SntrySTR configuration without system or data disruption.

SntrySTR Xpress Headline Features

- Enterprise class archiving at an SMB price
- Simple to install and manage
- Fast archive access from online RAID storage
- Data authenticity and longevity on robust Blu-ray media
- Removable media provides secure offsite disaster prevention
- Investment protection through cost-effective system upgrades



SntryML®

SntryML is QStar's network appliance specially optimized for the archival storage of emails. An ever increasing volume of data, the retention and management of emails is becoming a major issue for most organizations. Providing excellent performance, SntryML can capture, index and archive up to 250,000 messages per hour from an email server. Once captured, users can search the archive directly without accessing the email server, improving server performance while meeting email retention requirements.

SNTRYML®

SntryML can be deployed as an independent email archiving system or added to an existing SntrySTR solution. SntryML supports most emails servers including Microsoft Exchange and IBM Lotus Notes. As with all Sntry series solutions, SntryML is built on the QStar archive platform, which provides automation data management and support for the widest possible range of optical and tape library systems.

SntryML Headline Features

- Automatically captures 100% of all email sent or received
- Provides unlimited and seamless storage capacity for the email server
- Attachments are archived with the corresponding email message
- Alleviates mailbox limits and user restrictions
- Messages are archived in a vendor independent format (RFC822)
- Eliminates the need for email server backup

SntryVTL®

Exponential data growth, shrinking backup windows and the need for faster, more reliable data recovery have made backup to disk a compelling alternative to traditional tape. SntryVTL provides Virtual Tape Library management based on QStar's SntrySTR appliance architecture. Supporting all popular open system and Windows backup applications, SntryVTL emulates tape backup operations using resilient, high performance RAID storage.

SNTRYVTL®



QStar Appliance Solutions

SntryVTL integrates seamlessly with existing backup environments to dramatically improve the performance of both backup and recovery, while eliminating tape media costs and the administrative burden of tape management. The deployment of the SntryVTL saves time, money, management resource, and improves the reliability for critical disaster recovery operations. Like the other Sntry series solutions, SntryVTL is also extremely scalable. Designed for small and large backup demands, RAID storage capacities range from 2TB to 96TB in a single configuration.

SntryVTL Headline Features

- Compatible with Ethernet (iSCSI) and Fibre Channel networks
- Near instantaneous data recovery
- Fast sequential backup streaming
- Supports multiple virtual tape drives and libraries
- Highly scalable incremental capacity expansion
- Certified with all popular backup applications



QStar Software Products

QStar's software products provide innovative archive and data management functionality on an impressive range of Windows, Linux, Unix and Apple Mac operating systems. This OS independent software can be deployed as a stand alone product, in combination with other software components, or as optional functionality for the Sntry series of appliance solutions.

HSM

HSM provides all the functionality of QStar's SntrySTR appliance in an unbundled software configuration. The HSM archive and data management software platform can be installed on a wide range of operating systems including: Windows, Sun Solaris, HP/UX, IBM AIX, Linux and Apple Mac OS X.

Built for enterprise deployment, HSM manages the lifecycle of data across multiple storage levels. HSM provides the foundation for a resilient 3-2-1 archive strategy by combining fast RAID backed by a secure optical, tape or CAS archive and complete offline media management. No other archive solution on the market supports the same range of storage devices, providing long term hardware independence.

SntrySTR is designed to keep pace with a growing archive through non-disruptive incremental expansion from a few terabytes to petabytes. The use of optical and tape technology in combination with optional encryption and digital signature features delivers the data authenticity and longevity essential to any archive. HSM also supports green data center initiatives through the use of efficient automated libraries, dramatically reducing power consumption and cooling costs.

Advanced mirroring and data migration functionality are tightly integrated options within the HSM platform. Data Director and Network Migrator capabilities can be quickly deployed as greater levels of disaster prevention and remote data management are required. HSM provides a very cost effective archive solution with the performance, resilience and longevity essential for demanding professional archive environments.

HSM Headline Features

- Operating system independent software platform
- Automated data lifecycle management
- Online and offline automated storage management
- Highly scalable capacity and functionality
- Storage hardware independent platform architecture
- Optional encryption and digital signature data security
- Mirroring and data replication options



Data Director

Data Director extends the disaster prevention capabilities for SntrySTR and HSM and SntryPACS archives by creating greater system resilience and higher data availability. Using advanced transaction level synchronous mirroring technology, data archived on optical or tape libraries can be continuously replicated within a site or across the globe.

To meet a range of disaster prevention needs and budgets, Data Director is available with multiple real-time mirroring options. These include media mirroring within a single library, device mirroring within a single site, and site mirroring across multiple geographic locations. Failover capabilities ensure that if the primary archive cannot be accessed, requests are automatically directed to the secondary archive. Data Director's disaster prevention capabilities facilitate a 3-2-1 archive strategy by providing very cost effective and dependable business continuity for the QStar archives platform.

Data Director Headline Features

- Transaction level synchronous mirroring
- Mirroring within a site or around the world
- Hot standby mirrored volumes and failover
- Load balancing between multiple libraries
- Automatic data resynchronization recovery

SDJ / STJ

Simulated Disc or Tape Jukebox extends the functionality of SntrySTR and HSM by creating a mirrored multi-level archive. In combination with Data Director, SDJ / STJ can simultaneously mirror archive data on magnetic disk storage (RAID, NAS, CAS) and to a secure optical or tape library. This provides very fast access to archive records from disk storage with secure retention, and an extra level of system resilience mirroring to optical or tape. SDJ / STJ was designed specifically for archive environments that demand the security and flexibility of removable optical or tape media, but also require magnetic disk access performance.

SDJ / STJ support virtual library volumes on local RAID systems. Using a secure, real-time transaction logging cache, SDJ / STJ transparently mirrors data across disk and library storage devices providing a simultaneous exact copy of all data at two locations. An SDJ / STJ configuration improves access performance to the archive, reduces down time, and enhances system resilience as part of a 3-2-1 archive strategy.

SDJ / STJ Headline Features

- High performance archive access
- Real-time mirroring between virtual and physical libraries
- Automated archive management of different storage devices
- Transparent replication across local or remote sites
- Resilient configuration with multiple storage technologies



Network Migrator

Network Migrator provides heterogeneous server and client data migration services for stand alone applications or for archives managed by SntrySTR and HSM and SntryPACS. Utilizing advanced policy management, less frequently used files stored on distributed servers or clients can be automatically migrated to a central archive while remaining fully accessible from their local file systems.

A combination of file and file system attributes can be used to control the movement of data including: file modification date, file extensions, regular expression searches, and high-water marks. Once defined, data is migrated to the designated storage device and when archive retention dates have been met, files are released for user managed deletion at the end of their lifecycle.

Network Migrator can play a strategic role within a 3-2-1 archive by applying management policies to data stored on



QStar Software Products

remote servers and clients. Controlling the number of data copies, their physical locations and retention periods enables organizations to create system resilience, eliminate out of space conditions, reduce over provisioning, and maximize limited IT resources.

Network Migrator Headline Features

- Automated server and client data migration
- Heterogeneous servers and client management
- Comprehensive user definable migration policies
- Multi-level storage device support
- Transparent file versioning

Publishing & Mastering

Master

Master is an independent mastering and archive system for low cost DVD or CD optical media. The master software allows users to manage hundreds or thousands of DVD or CD media online within an automated optical library or offline using an intuitive graphical user interface.

Multiple archival media surfaces or partitions may be combined to create single or multiple logical volumes that can span both the media and jukebox boundaries. With the appearance of a standard magnetic disk, access to the data stored in the volume is entirely transparent to users and applications.

Master Headline Features

- DVD and CD mastering and archival storage
- Transportable file formats (UDF, ISO 9660)
- Direct or scheduled recording options
- Media spanning support large data sets
- Virtual proxy disk mastering feature

Publisher Archive

Publisher Archive provides archive management functionality specifically for popular CD, DVD and Blu-ray publication / duplication hardware. Using a tiered storage model, Publisher Archive transforms automated publication hardware into an enterprise archive by managing data on magnetic disk storage and offline optical media.

Data protection and cost effective expansion of the archive is achieved by moving or copying data to removable optical media as required. This strategy provides fast access to active data and secure storage of inactive data using optical publishing hardware in place of an automated library.

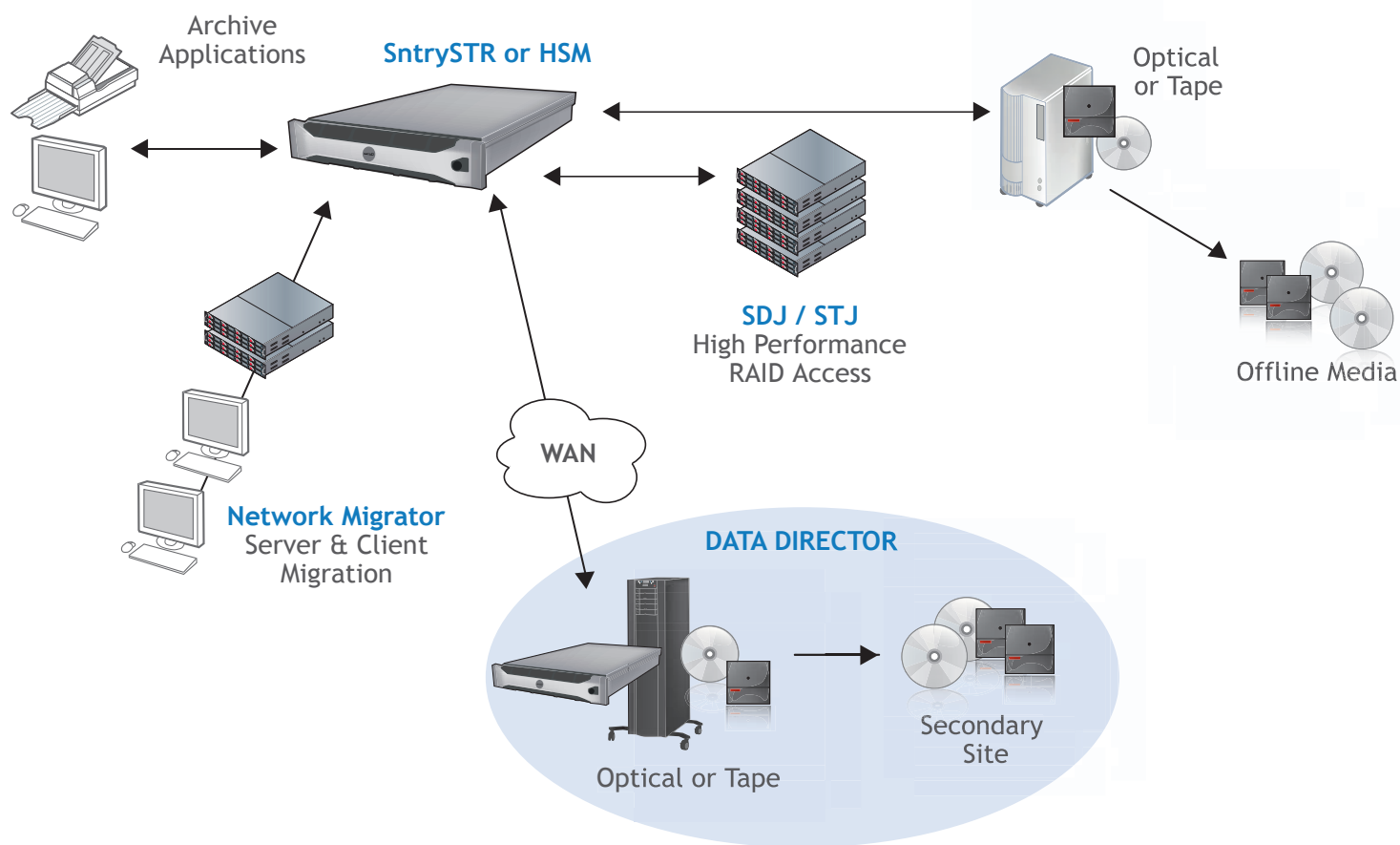
The Publisher Archive software can be loaded directly on an embedded PC within the publication system or can be installed on an external Windows PC with an attached publication system. As most inactive data is archived offline on optical media, Publisher Archive provides a very cost effective and green solution for long-term data storage.

Publisher Archive Headline Features

- Cost effective tiered storage online and book shelf archive
- Supports all popular CD, DVD and Blu-ray publication systems
- Transportable file formats (UDF, ISO 9660)
- Rolling quota disk to optical data migration
- Cost effective data duplication and distribution
- Custom disk labeling for corporate marketing of media distribution



QStar Archive & Data Management Solutions



SentrySTR & HSM - Enterprise Storage Management
Data Director - Mirrored Disaster Prevention
Network Migrator - Policy Based Server & Client Migration
SDJ / STJ - Mirrored Archive Performance

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