



STORAGE MANAGEMENT

Key benefits

Control costs

Consolidate storage systems management. You'll see the big picture and be able to make more informed storage-related decisions.

Reduce stress associated with backup and restore

Let StorageTek manage your backups and relieve your storage burden.

Retain control of your storage infrastructure

Manage storage more effectively and enable your staff to concentrate on core business issues.

Satisfy users by meeting service level agreements

With Remote Manage Storage services, StorageTek enhances your IT staff with storage management knowledge and capability.

Receive periodic performance reports

Our reporting and analysis capabilities allow you to view system performance and trend information, including recommendations for system upgrades or process changes.

Improve quality of service

Our storage experts make recommendations and report, monitor and manage your storage performance on a 24 x 7 x 365 basis through the Storage Operations Center (SOC).

Improve total cost of ownership

Raise overall storage efficiency and increase asset utilization. Take advantage of opportunities to migrate data to lower cost media.

Remote Managed Storage

As Open Systems storage environments become increasingly complex, so does the need for proactive and predictive storage management. **Remote Managed Storage services** from StorageTek® offers relief from daily storage management fire fighting by providing a suite of offerings that establishes a single point of accountability in complex multi-vendor environments. We work behind the scenes to control the chaos so you can focus on strategic IT issues.

Consistent, proactive and predictive

With **Remote Managed Storage services**, StorageTek consultants deliver services primarily through our remote Storage Operations Center (SOC), which is staffed 24 x 7 x 365. StorageTek's worldwide services team can also respond quickly on a local basis to provide additional support. The SOC staff strives to identify issues or potential problems before they impact your business and provides this service while you maintain control of your storage environment.

StorageTek's **Remote Managed Storage services** are designed to assist with critical storage operations in organizations that do not have the tools, time or skills to perform these activities themselves. Services are tailored to your specific storage management issues and budget:

- **Storage Infrastructure services:** StorageTek monitors and reports capacity and utilization, storage availability, backup events and SAN topology to help optimize your storage performance. You also receive inventory reports, event notification and configuration change notification.
- **Tape Backup and Restore services:** StorageTek helps support the daily success of your backup and restore activities, including backup configuration, backup and restore management, and offsite vaulting. We can help improve backup windows, increase the percentage of completed backups and provide more reliable restores, while also addressing your need for data protection.
- **Disk and Volume services:** StorageTek assists in storage capacity and disk performance management to improve total disk utilization and decrease the time and cost of provisioning disk volumes. This includes full configuration management, SAN provisioning, monitoring and reporting.
- **Global Storage Manager and Implementation services:** StorageTek's Global Storage Manager (GSM) software can help you self-manage your storage environment by providing storage reporting through a Web portal interface. With GSM, you can manage large, complex and dispersed storage environments efficiently. GSM includes assessment and implementation services from StorageTek.



Storage Infrastructure services

With Storage Infrastructure services, StorageTek assumes responsibility for remote monitoring, reporting and identifying problems in your storage environment. Services are performed at our world-class Storage Operations Center, where we help you respond more consistently and effectively to your dynamic storage needs. Services include 24 x 7 x 365 remote system monitoring, configuration tracking and detailed storage reporting. Reporting is provided through a storage Web portal and standard operations reports.

Capabilities

Design and installation

- Provide storage configuration design that matches your needs, which are identified by our Storage Assessment services
- Assume responsibility for the complete project and perform installation of the storage configuration
- Confirm that all appropriate remote connectivity components are installed and tested to provide a remote link to our SOC
- Coordinate all implementation and cutover activities needed to establish a successful link with your company for remote operations with the SOC

System monitoring

- 24 x 7 x 365 monitoring
- Real-time identification of storage infrastructure failures
- Real-time notification of thresholds (utilization, performance, etc.)
- Customer notification and vendor notification for dispatch
- Problem tracking and reporting

Configuration tracking

- Development and maintenance of your equipment configuration database
- Tracking of changes as reported by your team

Reporting

- Access to StorageTek Storage Web portal
- Notification of events, alerts, failures or errors via electronic communication (i.e., e-mail or pager)
- Daily operations reports of overall health and status of the storage infrastructure, delivered via e-mail

For storage management services and capabilities that go beyond Storage Infrastructure Services, we also offer Tape Backup and Restore services and Disk and Volume services.

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Tape Backup and Restore services

Tape Backup and Restore services from StorageTek provide remote management of tape backup and restore functionality while allowing you to retain control of your storage environment. We can provide this service on your site, or at a hosting facility, based on the service level agreement

Capabilities

Tape Backup and Restore management

- Perform scheduled backups and adhere to retention policies
- Execute on-demand volume, files and database application backups (ie: backup tape volumes)
- 24 x 7 x 365 real-time remote monitoring/reporting of backup performance including problem resolution
- Media management off-site vaulting management
- Hardware and software vendor management
- 24 x 7 x 365 customer access to expert assistance with customer-initiated file and volume restoration
- Implementation of software upgrades
- Quarterly performance review meetings

Capacity and availability

- Automated tape library and drive sizing as storage requirements change
- Tape media management to produce smooth performance
- Monitoring of automated tape resource utilization to identify potential problems
- Optional high-availability backup server configuration
- Creation of duplicate tape volumes for increased data protection
- Managed process for remote tape vaulting

System monitoring

- Trend analysis of backup and restore successes and failures
- Dedicated backup network design for data transfer to meet backup/restore windows

Change management

- Configuration adjustments in connection with changing business needs
- Promoting interoperability within your company's storage environment
- Provisioning relative to projected needs

Account management and ownership

- Designated technical engineer
- Monthly reporting
- Monthly status meetings to address concerns
- Problem resolution, from troubleshooting to solution execution
- Vendor management assistance



Disk and Volume services

Disk and Volume services address your business requirements and storage services needs associated with capacity, performance, availability, recoverability and security. StorageTek works jointly with your storage team to identify these needs relative to your desired service level agreements (SLAs), and then delivers Disk and Volume Services to your site or to your designated hosting facility.

Capabilities

Capacity management

- Create your initial storage volume configuration
- Develop an on-demand storage pool
- Add storage capacity according to your requirements
- Reconfigure your storage volumes (reassign or delete storage volumes) as needs change
- Monitor capacity utilization for improved storage management

Change management

- Configure multiple paths from storage infrastructure to hosts
- Configure mirrored disk protection

System monitoring

- Provide automatic performance optimization
- Monitor performance to identify and address variations
- Perform problem resolution, from troubleshooting to solution implementation
- Provision vendor management tools

Configuration tracking

- Perform configuration management in accordance with your company's needs
- Place mechanisms for effective interoperability
- Perform in a manner that meets your day-to-day expectations

Security implementation

- Implement zoning and LUN masking that limits volume visibility only to specified hosts
- Execute remote monitoring and management capabilities in accordance with your company's security policies (e.g., firewall, VPN)

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Data protection

- Create multiple point-in-time copies of data for archiving purposes
- Oversee remote replication of data for your organization's processes
- Produce a restorable point-in-time copy of the entire volume at specified time intervals
- Retain volume backup copies based on retention requirements
- Restore an entire volume on-demand per your stated needs

Account management and reporting

- Assign technical account engineers to address the needs of your business
- Provide monthly reporting to identify and manage foreseeable storage requirements:
 - Capacity utilization and planning updates are furnished to help you better forecast your company's future needs
 - Storage performance data is provided to maximize your return on investment
 - Status on availability of your storage configuration is given to your storage management staff
 - An event log is offered with frequent status reports
 - SAN topology is included as a deliverable
- Hold monthly status meetings to address your changing business issues

Global Services Manager software

StorageTek's Global Services Manager (GSM) software is designed for organizations that want to self-manage their storage infrastructure. GSM software helps companies efficiently manage large, complex and dispersed storage environments. From a single management console, GSM software helps organizations view and understand their storage environment, control storage assets and leverage storage investments. GSM software provides storage reporting through a Web portal interface and includes assessment and implementation services from StorageTek.



Specifications and pricing

Supported hardware and software

For the most recent list of hardware and software supported by **Remote Managed Storage services**, see the current Storage Operations Center Supported Systems Matrix, available from your StorageTek sales representative.

Pricing

Pricing for **Remote Managed Storage services** is based on the type of service, complexity and size of the storage environment, and length of engagement as indicated in the following summary table. Additional services may be provided and priced on an incremental basis.

Services pricing summary

Storage Infrastructure services — Memorandum of understanding

- Recurring monthly fee
- Minimum 24-month engagement
- Includes monitoring devices in a single SAN or backup network
- Additional fees apply for implementation and incremental SAN and/or backup network support

Tape Backup and Restore services — Service level agreement

Two price factors:

1. One-time, non-recurring, fee based on storage assessment and implementation, estimated on a not-to-exceed basis prior to engagement, and dependent upon project complexity and required time and resources.
2. Ongoing, monthly recurring fee based on number of terabytes managed and term of engagement.

Disk and Volume services — Service level agreement

- Recurring monthly fee
- Minimum 24-month engagement
- Additional fees apply for implementation based on project complexity and estimated on a not-to-exceed basis prior to engagement, and for incremental SAN and/or backup network support

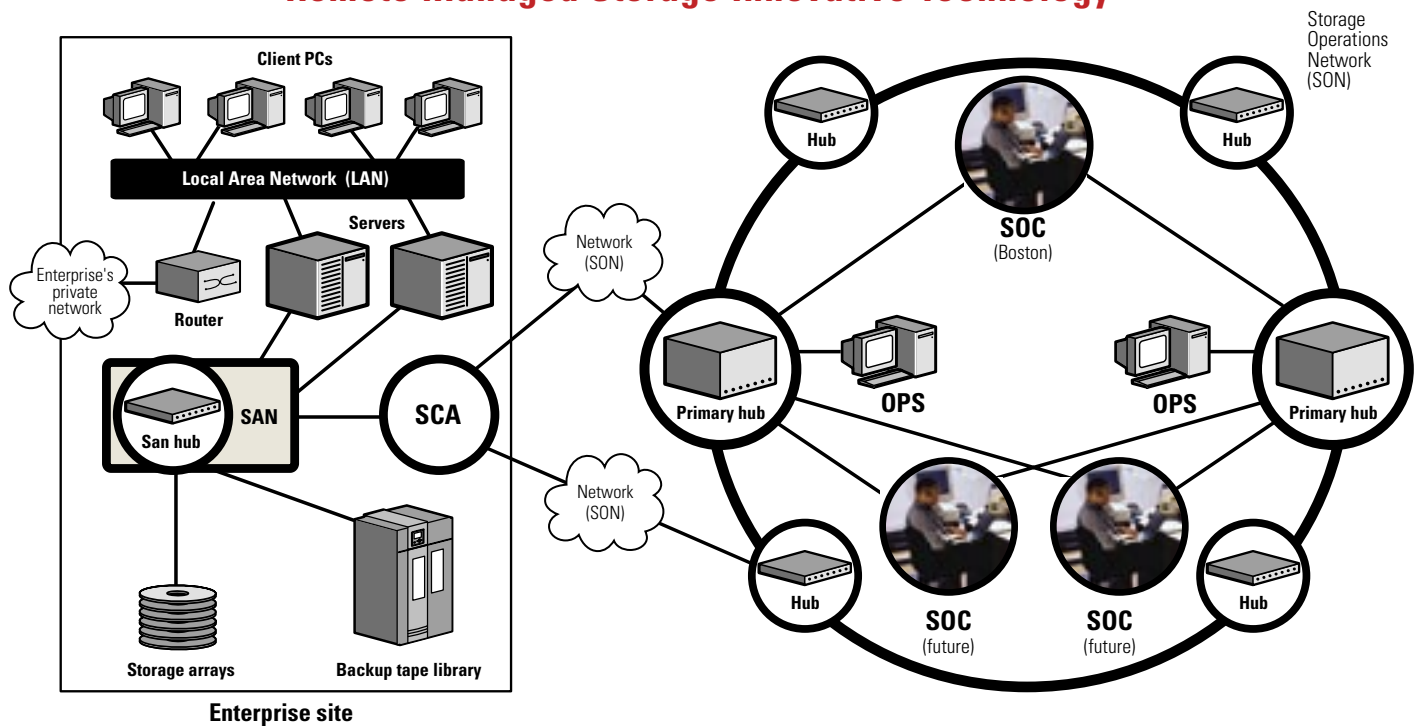
Cost savings

When looking at effective storage management capabilities and related technology management needs, development of an operations center is a time-consuming and expensive undertaking. Depending on a center's level of sophistication, development can take several years of engineering talent and several million dollars in capital.

StorageTek's **Remote Managed Storage services** help you respond to this need in a cost effective manner. We provide the resources and expertise you need today — at a price you can afford.

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Remote Managed Storage Innovative Technology



Storage Communication Appliance (SCA)	Storage Operations Network (SON)	Operations Processing System (OPS)	Storage Operations Center (SOC)
Communication, operation, automation, security, virtual command and control for remote storage infrastructures	Highly secure, highly available, dedicated global communications network connecting SOC, SCA and OPS	Application platform providing device data stream collection, homogenization, analysis, expert systems driven automation and communication	State-of-the-art facility provides round-the-clock monitoring, operation and management of remote storage infrastructures

Let's get started

Engage the storage experts

StorageTek Services provide world-class, worldwide service and support with a full range of offerings tailored to meet your business needs. More than 2,300 service professionals in more than 50 countries deliver solutions that support more than 17,000 customer data centers worldwide. Our services offerings help you service your customers, manage growth, reduce your management burden and maximize your return on investment.

To find out more about **Remote Managed Storage services** from StorageTek, contact your StorageTek representative or visit www.storagetek.com.



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ABOUT STORAGETEK®

Storage Technology Corporation (NYSE: STK) is a \$2 billion global company that enables businesses, through its information lifecycle management strategy, to align the cost of storage with the value of information. The company's innovative storage solutions manage the complexity and growth of information, lower costs, improve efficiency and protect investments. For more information, visit www.storagetek.com, or call 1.800.275.4785 or 01.303.673.2800.

WORLD HEADQUARTERS

Storage Technology Corporation
One StorageTek Drive
Louisville, Colorado 80028 USA
1.800.877.9220 or 01.303.673.5151