

LAN-Free Backup

With Xiotech's Magnitude 3D Systems and Spectra Logic Tape Libraries

Xiotech Corporation offers end-to-end LAN-free backup solutions, which improve LAN performance, reduce administrative burden, provide a strong ROI, and increase scalability and flexibility.

This paper provides an overview of the LAN-free backup configuration, process, and benefits. It also highlights technology from Spectra Logic, CommVault, CA, and Symantec.

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and backup application vendors such as CommVault, CA, and Symantec, this solution delivers all the benefits of LAN-free backup, along with the ease of use for which Xitech® systems have become known.

Effective Backup

is critical to every company's success, and with the ever-shrinking backup window, this can be a very difficult task. If something happens to your production data, you must be able to recover your data rapidly and effectively.

A better option than traditional backups is to move backup processes from the local area network (LAN) to a storage area network (SAN). Such "LAN-free backups" deliver many advantages over traditional, LAN-based backup processes.

LAN-Free Backup

With LAN-free backup, backup traffic is removed from the LAN, where bandwidth contention is a concern, to a high speed SAN. Though management of the backup process remains on the LAN, the underlying data movement occurs on the SAN fabric.

If you have investigated or implemented a SAN, you understand that much of the value lies in storage consolidation and reduced administration. You can realize similar value with LAN-free backups, as multiple servers share a SAN-attached tape library, which reduces the management of individual tape resources. Data management is easier as smaller backup devices are no longer scattered throughout the organization. In addition, those backup devices no longer need to be located near the servers.

The bottom line is that LAN-free backup is a more

LAN-free backup is a more flexible and scalable backup strategy that gives you better control of your data and its administration.

Advantages include:

- Improved LAN performance and end-user productivity
- Reduced administrative time and effort to manage the backup process
- Strong return on investment (ROI) through shared tape and storage resources
- Increased scalability and flexibility to satisfy changing storage and backup requirements

An integrated, end-to-end solution for LAN-free backup is available from Xitech Corporation. Featuring technology from Spectra Logic Corporation

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Magnitude 3D Storage

The LAN-free backup configuration requires deployment of a SAN to centralize your company's storage and remove backup traffic from the LAN. This network provides a high-speed conduit through which backup traffic can flow, enabling fast backups that do not impact application server performance and, therefore, end users.

Xitech's Magnitude 3D® family provides the perfect storage infrastructure for LAN-free backup. These systems integrate seamlessly with other components

of the solution, including tape libraries and backup application software.

The Magnitude 3D family is unique in that it masks the complexity typically associated with SANs, making it easy to store and manage information. Magnitude 3D systems eliminate planned downtime and allow any IT administrator to update and adapt storage configurations during business hours, without specialized expertise. In addition, the Magnitude 3D family's innovative clustered storage architecture

- The Spectra® T50 library is designed for the small to medium-sized business but has many features of the enterprise T950 and midrange T120 libraries, such as remote management tools, the ability to easily add slots and drives, and compatibility with disk. The Spectra T50 library sets the new standard for small libraries because it brings the highest end features to an affordable library that fits organizations of every size.

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delivers tremendous resilience and scalability. This makes the Magnitude 3D family the most business friendly on the market, substantially lowering total cost of ownership (TCO).

Spectra Logic T Series Libraries

You must protect your current data as well as be prepared for future growth, but few tape libraries address these needs affordably, and with a sophisticated feature set. Spectra Logic's T Series libraries, on the other hand, deliver true enterprise features and expandability.

- The Spectra T120's innovative features make data protection easier, lowering your TCO. The library gives you an unmatched selection of features, along with enterprise-class reliability and management—all in an affordable midrange library. The Spectra T120 library helps you get the most done automatically, affordably, and easily.
- The Spectra T950 library is a world-class enterprise tape and disk automation library. For data backup and recovery, this elite library leads the field in cost-effective innovation—from the greatest storage density to the first true integration of disk in an automated library. The Spectra T950 library is the best of breed, and with its lowest cost of ownership, is also the best deal for your data center.

The Spectra Logic T Series libraries are:

- Easy to use, manage, and maintain—lowering management costs
- Highly reliable with WORM (write once, read many) technology, with guaranteed support and high-security features—reducing risk
- Scalable, enabling you to expand the library as you need to—in features, performance, capacity, media, connectivity, and more, including an option that lets you readily add disk—protecting your investment

LAN-Free Backup

With this integrated solution (Fig. 1), Xiotech's Magnitude 3D system provides centralized data storage and can serve as the target of a LAN-free backup job to disk. The Spectra Logic tape library can either be the target of a backup job or the target of a backup copy job from disk.

Regardless of how backups are performed, the Spectra Logic library should be the final destination of the backup data, so the tapes can be moved off site for disaster recovery purposes.

As mentioned, the data flow for LAN-free backups is different than that of traditional methods. The backup server coordinates all backups and restores, including scheduling when a backup job is started.

Fig. 1 depicts a LAN-free backup solution with CommVault's Galaxy™ software. The "Application Server With Galaxy MediaAgent" has the ability to write directly to tape or disk. When the server starts its backup job, it pulls data from the Magnitude 3D system and then pushes it down the Fibre Channel network to either the Magnitude 3D storage system or the Spectra Logic tape library. The server is still involved in the backup process but dedicates fewer CPUs to the backup than in traditional scenarios.

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The next component is a Fibre Channel switch that connects all fiber optic cables, as well as the Magnitude 3D storage system, Spectra Logic tape library, and application servers. These servers have backup agents (data movers) and Fibre Channel cards installed. The final component of the solution is the backup server and backup agents, which manage the backup and restore processes from beginning to end.

For a server to have the ability to perform LAN-free backups, it must be properly zoned to see both the Magnitude 3D system and the tape library. It is a best practice to have two separate zones for each server: one zone with the server and Magnitude 3D and another zone with the server and the Spectra Logic tape library.

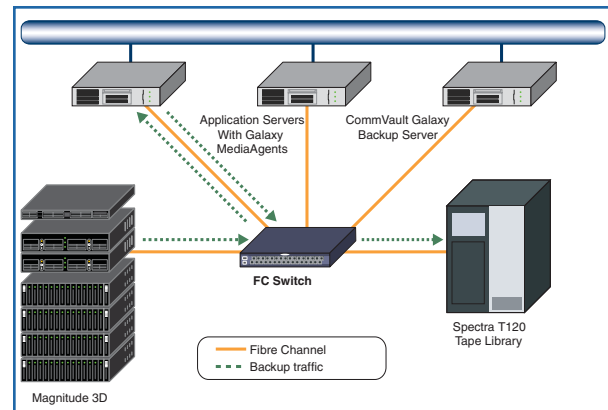


Fig. 1. LAN-Free Backup to Tape (using CommVault Galaxy)

Combined Benefits

With the Xiotech LAN-free backup solution, backup devices are shared among all servers connected to the SAN, so equipment costs are reduced. In addition, centralizing tape resources provides greater control over the backup and restore process, while reducing administrative overhead. All this adds up to lower capital and operating expenses and a healthier bottom line.

Appendix: A Closer Look at Backup Applications

CommVault Galaxy

Benefits of this solution include:

- Greater end-user productivity, as backup processes are removed from the LAN.
- Lower capital expenses through sharing of tape libraries over multiple servers, truly leveraging the many-to-many connectivity advantages of the SAN.
- Reduced administrative burden and expense:
 - Easy-to-use components: storage, tape libraries, backup software
 - Centralized management
 - Fewer backup resources to manage
 - Automation, and scheduling of backup events
- Nearly limitless scalability

Conclusion

The Xiotech LAN-free solution tape libraries can help your organization minimize the effects of a reduced backup window. With shared storage and tape resources, your organization will realize greater control over backup and restore processes, while reducing administrative overhead. An effective backup strategy is critical to your organization's success. Let Xiotech help you maintain data accessibility and LAN performance, while maximizing your administrative resources and return on investment.

The CommVault® QiNetix™ platform automates data management by moving from static to dynamic management. It combines traditionally separate products: data movement and data management. Built on the proven CommVault Common Technology Engine (CTE) that moves, manages, and catalogues data, the QiNetix platform integrates CommVault's Galaxy™ backup and recovery software that manages the LAN-free backup process. The interaction and integration of these components offer you many business and operational advantages, such as superior ROI, better use of storage resources, higher staff productivity, maximum data availability, and reduced TCO.

CommVault Galaxy software supports full, incremental, differential, and synthetic full backups. Synthetic full backups enable you to create full backups from existing incremental or differential backups. Because the source data originates from existing backups, the client computers are not burdened with another full backup.

CommVault's LAN-free backup software module uses and supports industry-standard protocols, making it easy for Galaxy software to integrate with Magnitude 3D storage and Spectra Logic tape libraries. In addition, Galaxy fully supports backup to disk as well as tape—so you can back up data to Magnitude 3D virtual disks, and then utilize the Galaxy "Auxiliary Copy" command to transfer the backup from disk to tape without affecting production servers. This provides a full backup on disk for fast restores as well as a full copy offsite for disaster recovery.

VERITAS (Symantec) Backup Exec

Backup Exec™ for Windows Servers provides comprehensive, cost-effective, and certified backup and recovery—including the fastest disk-based recovery.

An intuitive, Web-based user interface simplifies installation and management of backup and remote servers with easy-to-use wizards. Centralized administration provides scalable management of servers. Wizards simplify data protection and recovery procedures for any level user and any size network.

With a complete family of high-performance agents and options to protect Windows, Linux, and UNIX server data, as well as desktops and laptops, Backup Exec offers simple, flexible, and granular data protection.

LAN-free backup is enabled by the SAN Shared Storage Option (SAN SSO), which allows distributed backup servers to centralize storage devices that are connected over a Fibre Channel SAN. This solution delivers greater performance, efficiency, and fault tolerance—all which help lower TCO.

CA BrightStor ARCserve Backup

CA's BrightStor® ARCserve® Backup is a high-performance, reliable solution to meet all your organization's backup and restore needs. It integrates with other CA software, so you can extend your data storage and security capabilities as your business grows, regardless of the operating systems or applications you use.

BrightStor ARCserve Backup is easy to use, lowering the chance for error and increasing the reliability of data protection. It enables you to implement defined data-protection policies and includes a built-in anti-virus scan-and-cure engine drawn from CA's eTrust security technology. Every file that is backed up or restored is automatically scanned for viruses, helping to ensure the integrity of your data.

The SAN Option integrates BrightStor ARCserve Backup with the SAN and Magnitude 3D system. With this option, you can offload backup/restore tasks from your LAN, giving you unlimited storage scalability and enhancing LAN performance. In addition, it allows sharing of storage devices between multiple BrightStor ARCserve Backup servers and provides advanced device and media management tools.

The SAN Option includes the Tape Library Option, which provides advanced device and media management for multiple drive libraries. Utilizing this option, BrightStor ARCserve backup can send simultaneous data streams to each drive to optimize throughput on any multiple-drive tape library.

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The Intelligent Control (ICON) management platform employs an Intel® processor.

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