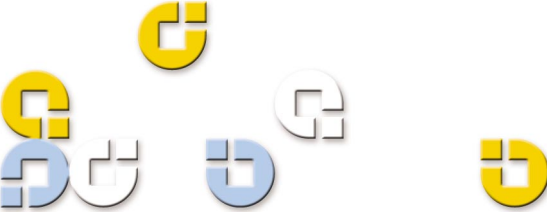


**Leading Autoloader Customer
Purchase Requirements**



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Leading Autoloader Customer Purchase Requirements

Executive Overview

The volume of digital information and organization data being generated continues to rise. Companies are generating larger files, archiving more emails, and storing data longer than before. At the same time, the data backup window, the time available each night to backup a company's data without impacting the employees on the network, continues to shrink. Network administrators can secure their growing accumulation of data, even across multiple locations, with the addition of an automated tape backup device. IT managers want a backup device that has ease of administration, seamless integration into the network, and the ability to expand storage capacity in tandem with the rising data tide, all at an affordable price. This white paper, based on survey research conducted by Zanthus, outlines data backup processes, preferences, and requirements as articulated by a nationwide sample of IT personnel with responsibility for protecting data at their organizations.

Data protection matters more than ever

Protecting business and organization data is more important now than ever before. A regularly scheduled backup is standard practice at most companies, in part because so many records, documents, and materials are stored digitally rather than as hard copies. File cabinets full of papers have given way to servers storing digital documents. Compared to paper files, storing digital data on servers is clearly more efficient but there is also more risk involved. The loss or corruption of data on the server can severely disrupt a business. As network managers can attest, an innocent user opening a mysterious email can set loose a virus that damages files across the network. With a scheduled data backup system in place, an administrator can retrieve missing files and replace corrupt files. They can execute a fast recovery and get the company up and running again.

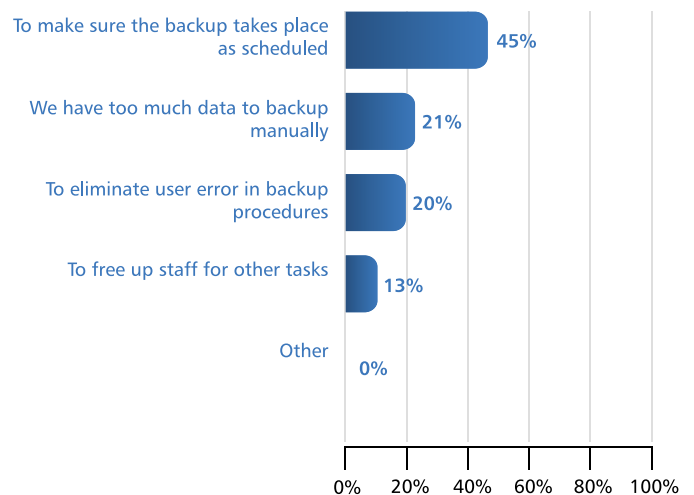
To make a backup copy of data on a server, companies can choose between manual and automated backup solutions. With a manual backup device, an administrator feeds the storage media (most often tape) one by one into the unit, copying data onto successive tapes until all the data has been copied. Generally speaking, the amount of time it takes to perform the backup is determined by the volume of data copied, along with the capacity and speed of the backup drive and tapes. Given the quantity of data being stored and the lack of time to do it in, backing up manually is feasible in fewer and fewer offices today. One beleaguered MIS manager described manual backup as "a lot of busy work; it's hands-on. You have to change tapes."

Most companies have found that an automated backup device, such as an autoloader does the job more efficiently

and reliably than a manual backup unit. An autoloader holds multiple tapes; enough to perform a week's worth of backups, for example. Using a backup software application, an administrator schedules the autoloader to run the backup during a certain time frame; this is usually at night while users are off the network. Because an autoloader holds multiple tapes, it can record more data, and the administrator is freed up from feeding fresh tapes into it as the backup progresses.

IT managers surveyed said they bought an autoloader most recently rather than a manual backup device with the goal of ensuring the backup took place as scheduled, regardless of work load, vacation schedules, or whether IT staff are onsite or off-site. The assurance that data backup provides is realized only to the extent that data is actually backed up. In data backup, the key is consistency of the process. Consistency is much more likely with an autoloader, because it is automated and therefore mostly immune from issues related to staff availability or user error. An MIS manager at a law firm said, "You can screw up other things and it's OK. But screw up the backups and you can lose your job."

Reasons for Using Automated Vs. Manual Backup Devices



Data storage requirements are growing

IT professionals know that data on the desktop will grow to reach the hard drive's capacity, and data on the server will eventually expand to the server's limits. In the Zanthus survey of recent autoloader buyers, 63% said they managed 1TB or more in their data center; this is a 13% increase in data storage over the findings from a similar 2002 study. Greater volumes of data are being stored for two key reasons. First, survey respondents said data storage is growing within applications already in use, rather than in brand new applications. They are utilizing more Word, more Excel, and

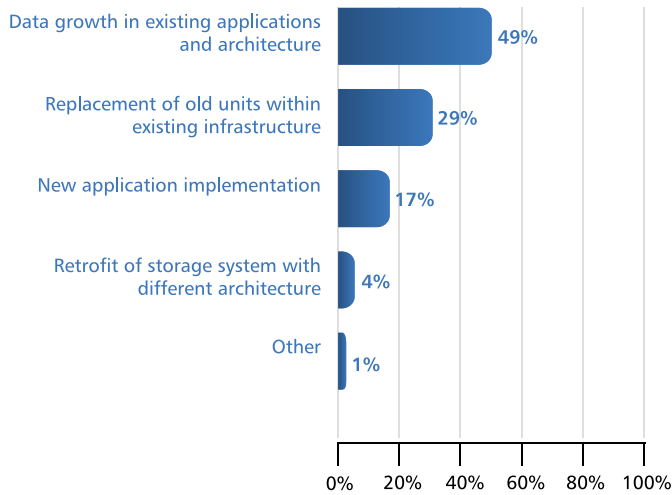
Leading Autoloader Customer Purchase Requirements

more Customer Relationship Management (CRM) and Enterprise Resource Planning (ERP) data. In addition, photos and images, pdfs, video presentations and training, and email with attachments all contribute to the rising collection.

What end users want most from an Autoloader is seamless integration, expansion when needed, and easy administration.

Because most companies face a rising tide of the types of data they are already generating rather than data from new applications, what's called for is a backup solution that integrates well into the current network infrastructure. In fact, survey respondents said a key factor when choosing an autoloader is easy assimilation with the network.

Motivating Factors for Recent Autoloader Purchase



Given that most data growth is in existing applications and IT managers want an autoloader that will fit well in the current network, it makes sense that the most common technology strategy for network-related components is to buy with an eye to the future. Autoloader buyers said they want the ability to expand their technology acquisitions so they'll perform for several years, rather than buying and replacing technology every two years.

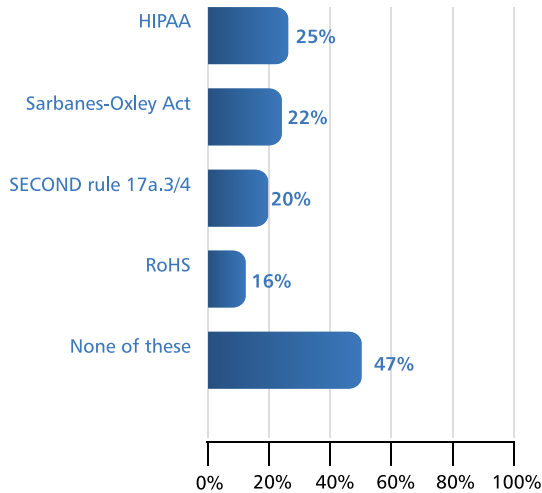
Secondly, many companies now must save corporate and employee records to meet S.E.C., government and international regulatory requirements. About half of recent autoloader buyers said they had made changes to their data backup processes to comply with regulations such as HIPAA (25%), the Sarbanes-Oxley Act (22%), the second rule 17a.-3 and 17a.-4 (part of the Securities Exchange Act) (20%), and the European Union (EU) directive on Restrictions of Hazardous Substances (RoHS) (16%).

IT managers want a backup device that's easy to understand and administer. One IT manager asked for "a solution that's very flexible to administer, straightforward to use, with a graphical user interface (GUI) and Web administration. I don't have to put my staff through six months of training to learn to get the most out of it."

Seamless integration with mainstream hardware

IT Managers need autoloaders that are designed to integrate into virtually all network operating systems, including Windows, IBM, Novell, Unix, Linux, and Mac, when paired with the appropriate software and hardware components.

Regulations that Impact the Backup Process



By pointing and clicking through an autoloader Compatibility Guide, such as the guide on www.quantum.com, users can design a backup solution that fits their preferences or installed technology for the network's operating system, interface (SCSI or Fibre Channel) preferred or existing tape drive format, and backup software application. A Compatibility Guide displays the backup solution options given the user-defined specifications in list form that includes all components necessary to get operational, including the backup devices, routers and hubs, software, and storage media.

Web-enabled remote management ensures a reliable backup

In the research, IT professionals chose Web-enabled remote management as the most valued autoloader feature. With any browser on any PC, administrators want their autoloader to get the status and location of tapes, perform diagnostics, upgrade firmware, and review performance and error logs. Using remote management capability, it is simple to perform any task related to backup without having to make an unexpected trek into the office.

Survey respondents overwhelmingly said their reason for buying an autoloader rather than a manual backup device was to make sure the backup took place as scheduled. The Web-enabled remote management capabilities ensure that the backup always precedes as planned because the administrator can reach, diagnose, and control the device from any location with Internet access. Using the Web-based tool, an administrator can easily oversee the backup in other sites as well, such as satellite offices or temporary work sites.

Modular architecture designed to facilitate service, expansion, and upgrades

According to respondents, next in value after remote management was the feature of removable tape cartridge magazines. A magazine is the removable container that holds multiple tape cartridges. An autoloader with magazines instead of fixed internal slots gives users the flexibility of easy transportation or off-site storage. The magazines can be removed to load or unload an entire set of tapes, rather than laboriously handling tapes one at a time. Or, the administrator can use the mail slot to remove or insert tapes while the autoloader is operating, without disrupting the backup. When time is of the essence, the administrator can pull the magazines in a matter of seconds and move them to a secure off-site location.

Most respondents said that their strategy for buying network-related components is to choose technology that can scale up to meet future demand, thus extending the working life of components and bringing down the total cost of ownership. A few autoloaders, such as Quantum's SuperLoader™ 3, complement this strategy with a two magazine design. When more networked storage is needed, capacity can be doubled by adding the second eight-cartridge magazine to the unit. A manager at a company that does IT outsourcing to the manufacturing industry selected a two cartridge magazine autoloader over other options because "It lends itself to our continuing needs. We don't have the need currently, but I know we will eventually."

Integration and compatibility with the most popular drive formats offered

Historically, DLT and SDLT have been the most popular tape drive formats, and the preference for DLT and SDLT continues today. The survey showed that the drive formats purchased most often are DLT (40% of recent purchases) and SDLT (32% of recent purchases). LTO has gained favor in the past few years; in this study 24% of autoloader buyers had bought LTO drives recently (most often LTO-2 varieties), doubling the number of purchased LTO drives in 2002.

Among IT professionals buying their second or third autoloader for their data center, most (45%) said they chose a drive format that was backwards-compatible with the technology they already owned, and slightly fewer (37%) said their company had designated a certain drive format as the corporate standard. Both scenarios indicate that companies want a device that fits well within the current network infrastructure. Choosing a drive that's backwards compatible or a corporate standard brings down the total cost of ownership too; companies can use the tape media they already own, and administrators spend less time learning about and configuring the device. An IT manager at a greeting card company, storing two terabytes, said " We have a big investment in tape; we have 200 tapes. So a new solution will have to be backwards-compatible so we can make use of our tape supply."

How do first-time buyers determine which variety of backup solution to adopt?

There are four factors to consider:

- The length of the backup window (backup is frequently done at night when users are off the networks)
- The quantity of data to be backed up
- The speed at which the volume of server data is growing
- How frequently tapes will be taken off-site for secure storage

The Backup Basics booklet at www.quantum.com provides a worksheet for determining appropriate backup solutions and drive formats based on these factors.

Summary

Automated tape backup makes data protection a reliable, scheduled process; it performs as expected, giving IT staff more time to focus on issues that require expertise and skill. When the backup is automatic, it occurs regardless of time constraints or other IT issues that take precedence.

Web-enabled remote management simplifies the backup with the ability to reach and control the autoloader from any location with Internet access. A single administrator can oversee backups in multiple sites, further reducing the time IT staff must spend on what's considered a routine (but crucial) task.

With the volume of stored data growing, autoloader solutions provide data protection today and into the future, with the ability to scale up storage capacity along with the rise in server data. Autoloaders with one or two removable cartridge magazines facilitates easy loading and unloading.

Quantum's Autoloader Solutions

Quantum's autoloader solutions meet companies' data backup requirements by building integration, expansion capabilities, and easy administration into each device. Quantum products offer industry-leading engineering in a design favored by OEMs (original equipment manufacturers, namely computer server vendors) and businesses alike.

The new Quantum SuperLoader 3 provides the features that IT Managers require:

- Web-enabled remote management for anytime anywhere access
- Seamless integration with a variety of networks and operating systems
- Modular architecture and removable magazines for easy expansion and upgrading

For additional information visit us at www.quantum.com or call 866-827-1500.

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