



Changing The World of Storage

nTier FAMILY

nTier 500



nTier 900



nTier 700



nTier Archive and Backup Overview

Spectra nTier servers give you the flexibility and applications to protect data the way that your organization requires—and they provide a range of scalable capacities to handle the amount of data you have to protect.

The nTier server family includes the nTier500, nTier700, and the nTier900. All nTier servers have these features in common:

- BlueScale management interface
- RAID 6: double protection with double parity
- Ethernet connectivity to the host environment
- Software that supports a range of archival requirements, such as replication of important data and continuous data protection through Microsoft® DPM

nTier500

Application: Department, Work group

- 4 TB-16 TB
- 3U



nTier700

Application: Data center

- 10 TB-60 TB
- 10 TB upgrades
- RAID 6
- 4U



“Backups are not archives....”

Q. What are Archives?

A. [Data storage that lets you] “retrieve information grouped in a logical way.”

Q. What are Backups?

A. “Weekly or monthly full backups [that is, copies of data] are performed, and then kept from one year to 50 years, depending on business requirements.”

—Curtis Preston, Storage Magazine, September 2006

nTier900

Application: Enterprise

- Cluster from 60TB-400+TB
- 10 TB upgrades
- Up to 32U; As shown: 8U
- RAID 6
- Cluster failover

* Expected availability Summer 2008



New Problem. Right Solution.

Spectra Logic nTier Archive and Backup Servers

Data backed up and stored to tape is increasingly on-call and accessed in ways — and time frames—that were inconceivable when automated data backup hardware and software were initially developed.

Tape does what it was meant to do: store data for a long time. Libraries and backup software do what they were designed to do: let you automate data backup so that you have copies of data, stored on tape, which you can get to when you have to.

Backup still requires tape for cost-effective, long-term storage — but backup is no longer enough.

The New Problem

Stored data is now subject to new archival and backup demands, thanks to a raft of legislation and regulation, as well as expectations resulting from technological advancement.

LEGISLATION:

HIPAA, Sarbanes-Oxley, and others govern long-term data retention and tracking; protection against unauthorized use; and data deletion.

REGULATION:

New federal e-discovery regulations permit courts to require that data is provided within specific, short time frames.

EXPECTATION:

New technologies support deduplication, replication, tiered storage (HSM), disk-to-disk-to-tape (D2D2T), and many more techniques

that help organizations keep up with data growth, shorten backup and restore time, and provide other options that standard data backup and restore strategies don't support.

Standard data backup and disaster recovery strategies and environments don't support these demands.

The math is easy: Just balance the cost of implementing archiving against that of losing a lawsuit because you couldn't turn up a piece of evidence in a timely manner.

Rich Castagne, Storage Magazine

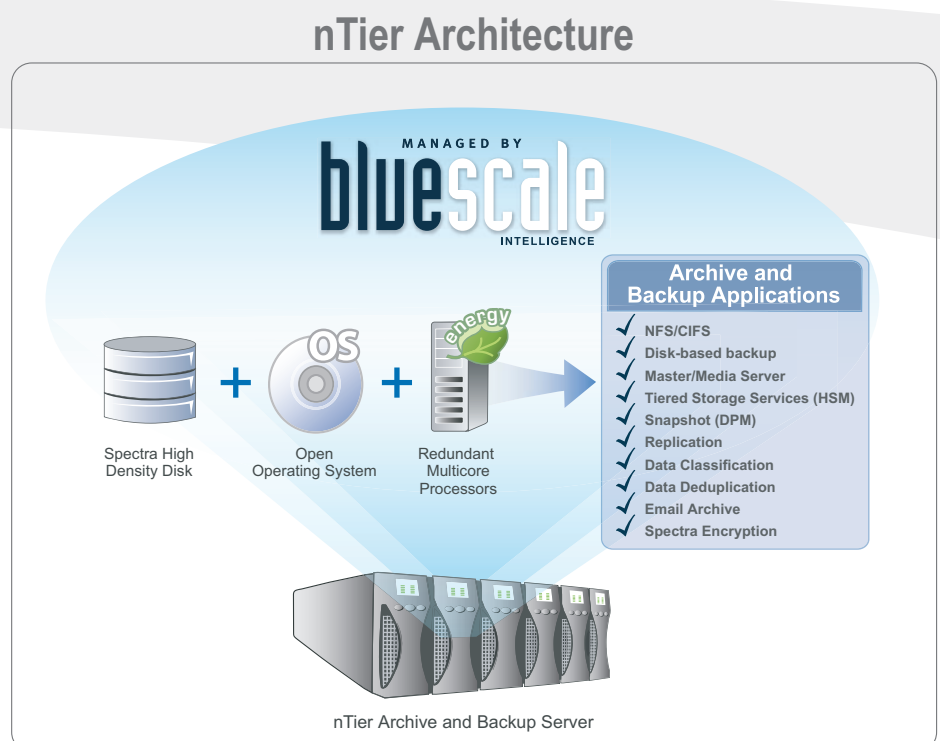
The Right Solution: Spectra® nTier Archive and Backup Servers

The Spectra nTier line of archive and backup servers are the first in a new category of data protection, one that simply and elegantly addresses the multiple problems of how to manage, access, and store data once it's moved from primary storage.

The idea is simple: once your data moves off primary storage to the nTier archive and backup server environment, it stays there. Archive and backup are handled on nTier, so data never has to go back out on the SAN or through external servers. By addressing the entire problem in a single solution, rather than approaching it through a multitude of single-purpose appliances, you save time, money, and energy, through an inherent simplicity. With nTier archive and backup, you:

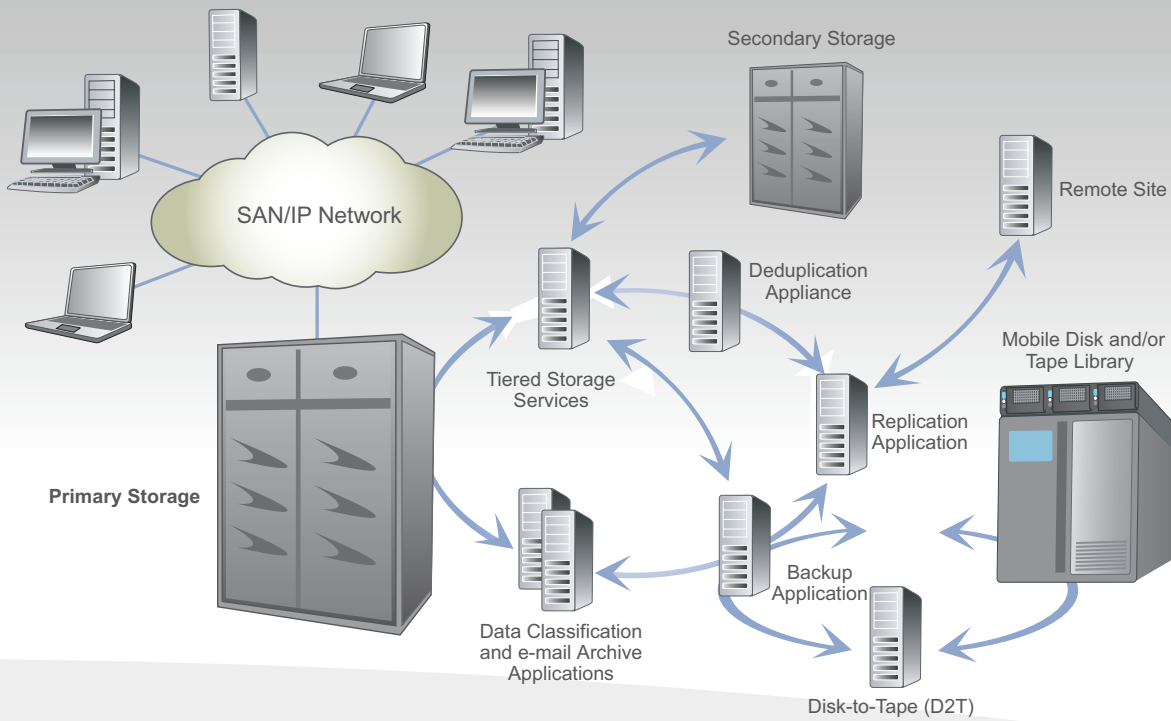
- Need fewer appliances and applications to learn to use, integrate, support, and upgrade
- Have fewer support issues, since you have a single vendor to supply support scaled to your specific requirements
- Can access the entire archive and backup environment through one graphical, easy-to-use interface
- Reduce significantly the load on your SAN environment as data does not have to travel across it every time you add a new application such as snapshots, to help you manage your archived data

nTier Architecture

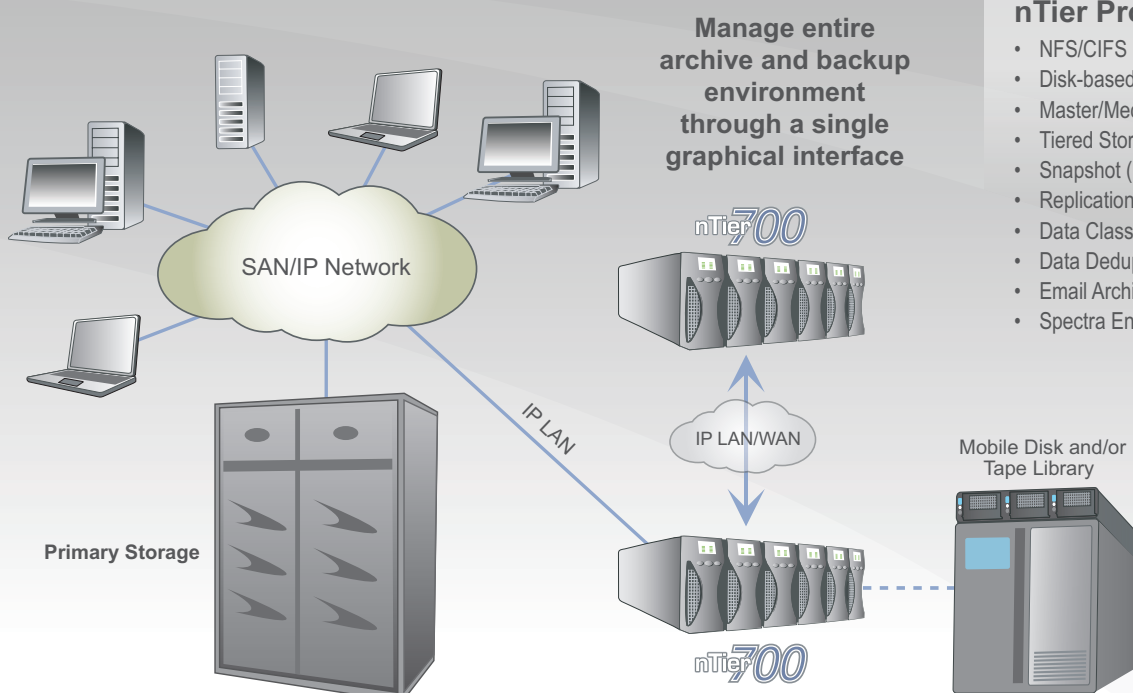


nTier servers provide an integrated approach to data archive and backup, while simplifying your data protection environment. Look at the whole problem and select a single solution that will help you keep up as demands continue to increase on your backed up data: Spectra nTier archive and backup servers.

Data Archive and Backup Without nTier Services



Data Archive and Backup With nTier Services



Manage entire archive and backup environment through a single graphical interface

nTier Provides:

- NFS/CIFS
- Disk-based backup
- Master/Media Server
- Tiered Storage Services (HSM)
- Snapshot (DPM)
- Replication
- Data Classification*
- Data Deduplication*
- Email Archive*
- Spectra Encryption*

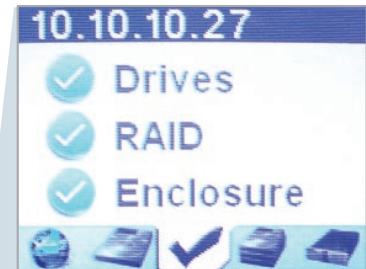
* Spectra Logic reserves the right to change product roadmap at any time. Check with your Spectra Logic sales representative for application availability.

One of the significant differences between standard primary disk and nTier server disk...

Primary disk manufacturers assume a life-span of about 3 years for their products, which are designed for highly transactional data, rather than for storage density and power efficiency. Spectra Logic nTier is designed to be upgraded, scaled and supported for an extended lifespan.

nTier Use: Easy to Configure and Manage

- The BlueScale graphical interface provides intuitive guided configuration and icon-driven management tools like those that are available on Spectra T-Series libraries. With nTier, use a common interface to access disk, tape, and a wide range of applications, such as Microsoft Data Protection Manager (DPM) and deduplication, all from a single interface.
- Each blade in an nTier700 server has a front panel LCD that shows the blade status.



Hot swap disk in hot blade
in the racked nTier700.*



nTier Reliability: Easy to Maintain

- The bladed disk in an nTier server can be hot-swapped; the modular design simplifies adding capacity. In addition, you can also replace the fans, power supplies, and boards
- Highly reliable with redundant, N+1 power supplies, and RAID 6 double parity protection

nTier Capacity: Scales Easily

- The nTier servers grow from 4 TB in the nTier500, to 10–60 TB in the nTier700, and 60 to 400+ TB in the nTier900
- Add capacity in appropriately sized increments, which arrive in preconfigured RAID 6 sets that are ready to slide into nTier and use immediately
- Increases in capacity as higher capacity disk become available

nTier Efficiency: High Density and Low Power Use

- The nTier700 and nTier900 are the only NAS solutions available today that supply 60 TB of native RAID storage in only 4U. The nTier500 supplies 16TB in 3U
- Very efficient disk designed for intelligent power conservation

**Patent pending.*

Spectra Logic has done it again. With a 13 year track-record of industry firsts in the backup and recovery market, the new nTier platform enables backup, recovery, and archive processes on a single disk-based platform.

*Brian Garrett,
Analyst, Enterprise Strategy Group*

The nTier servers support NFS/CIFS file systems and multiple optional applications. With flexible file system support, you can assign a disk partition to its own network drive letter and display NFS/CIFS data in the standard drive directory structure. Along with NFS/CIFS, nTier supports a wide range of archive and backup applications. Select only the applications you need; if you need more applications later, you can easily add them. Over time, a wide range of applications will be available, such as:

Disk-to-Disk-to-Tape Support: Easily back up data using nTier-to-tape support—disk to tape, designed for ease of movement between disk and a Spectra automated tape library. With disk-to-tape support, you can greatly speed data restoration, important in responding to e-discovery and other requests.

Master/Media Server: Run backup software applications and optionally use nTier as master and media servers.

Tiered Storage Services (HSM & ILM): Set policies to move data so that it is stored properly, appropriate to the data's value and age, and according to rules you set up.

Snapshot: Microsoft Data Protection Manager 2007 (DPM) makes copies of data at specific intervals so that the site can restore to a specific point in time. Increasingly, it's important to establish recovery time objectives that are appropriate for your organization so that data recovery is swift and timely.

Replication: Make a copy of important data for disaster recovery—that you create or store at a remote site. If your primary site goes down, you have an exact copy of your data at a remote site to bring you back up and running quickly.

Data Classification*: Search the data stored on nTier server; for e-discovery and other rapid retrieval requirements.

Deduplication*: Store only a single copy of a record, rather than storing multiple copies of each record. This saves you a great deal of disk space—letting you easily store 10 to 20+ times the amount of data, rather than storing multiple copies of many files.

E-mail Archive*: Store e-mail by policy and search it using keyword, email address, dates, or attachments.

Encryption*: Keep data secure and manage keys through the BlueScale interface.

Feature	nTier500	nTier700	nTier900
Capacity options	4 TB (8 x 500 GB SATA drives) 8 TB (16 x 500 GB SATA drives) 16 TB (16 x 1 TB SATA drives)	10 – 60 TB (10 - 60 x 1 TB SATA drives) 10 TB upgrades	10 - 400+ TB (10 x 1 TB) in multiple 10 TB increments
RAID level	RAID 6		
Dimensions (HxWxD)	5.25" (3U) x 19" x 27" 13.3 cm x 48.3 cm x 68.6 cm	6.9" (4U) x 17.5" x 41" 17.5 cm x 44.5 cm x 104.1 cm	Multiples of: 6.9" (4U) x 17.5" x 41" 17.5 cm x 44.5 cm x 104.1 cm
CPU	Redundant Intel Xeon Multicore Processors		
Interfaces	Host: 2 x 1 Gb Ethernet; 10 Gb Ethernet ready Library/Removable storage: LVD SCSI; Fibre Channel, iSCSI option	Host: 1 x 10 Gb Ethernet Standard Additional 1 Gb or 10 Gb Ethernet optional Library/Removable storage: LVD SCSI; Fibre Channel, iSCSI option	Host: 10 Gb Ethernet Standard Additional 1 Gb or 10 Gb Ethernet optional Library/Removable storage: LVD SCSI; Fibre Channel, iSCSI option
Min. Memory	4 GB	8 GB	Multiples of 8 GB
Power	AC voltage: 100-240 VAC	AC voltage: 100-240 VAC	AC voltage: 100-240 VAC

* Spectra Logic reserves the right to change product roadmap at any time. Check with your Spectra Logic sales representative for application availability.



Avax International	N0B 1Z0	www.avax.com
PO Box 542	647-367-1039	email - sales@avax.com
Hillsburgh, ON	877-401-1892	Fax 647-438-2242

Spectra Logic® and the Spectra Logic logo are registered trademarks of Spectra Logic Corporation. All rights reserved worldwide. All other trademarks and registered trademarks are the property of their respective owners. Specifications are subject to change without notice. Please contact Spectra Logic for availability of specific configurations and technologies.

nTier.v2.9.07

