



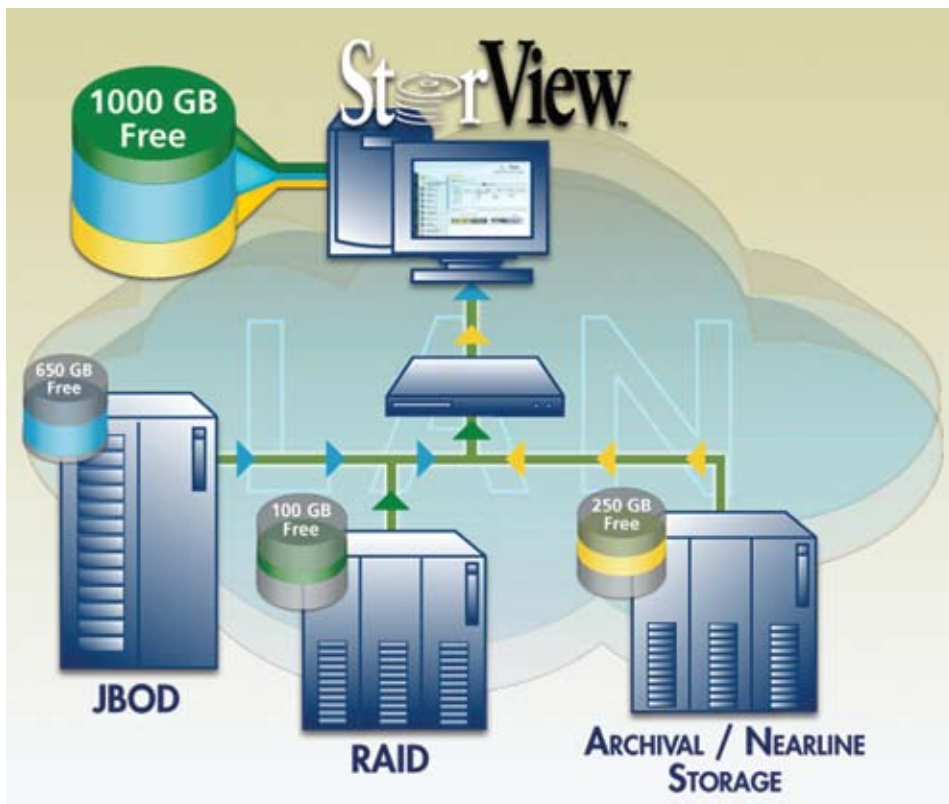
**Xyratex RAID:
Compelling Value, Uncommon Reliability**

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• The Xyratex RAID Family: Compelling Value, Uncommon Reliability

Xyratex RAID solutions are ultra high density mass storage systems specifically designed for the Original Equipment Manufacturer (OEM) storage and server market. These solutions offer the unbeatable combination of high performance, reliability, and large capacity storage.

Xyratex has shipped high-performance RAID systems since 1998 leveraging the best-in-class power, packaging and enclosure design. Key applications for this product family include e-mail, transaction data processing, reference storage, digital media, scientific and technical applications. Other applications for the RAID family include mass storage for regulatory and legal compliance, virtual tape libraries, disk-to-disk back-up, archiving, and fixed content.



Creating virtual logical drives

Key Benefits and Features Include:

- Enterprise-class features including RAID 6 and Snapshot
- Flexibility to optimize tiered storage including SAS or SATA as well as multiple RAID 1, 5, 6, 10 & 50 settings
- Online capacity growth through dynamic array and LUN expansion
- Modular chassis design and redundant, hot swappable components for continuous operation
- Scalability: 96 drives per controller
- High-speed connectivity: Four (4) 8 Gb/s Fibre Channel or Four (4) 3 Gb/s SAS host connections per system
- Efficient cooling with fewer fans

RAID

—● Data Protection That Responds to Your Environment

Data is valuable and requires multi-dimension protection. Damage can ensue from negligence, disgruntled employees, white collar espionage, curiosity, disasters, and computer system failures. Xyratex has many data protection features; two highlighted in this brochure are snapshots and virtual logical drives.

The Value of Snapshots Is Based on the Value of Data

Immediate access to data is a necessity for most businesses. Businesses can no longer wait days to retrieve their data. According to a Needham & Company investment analysis, a common benchmark among IT managers is that one cent of data backup is worth \$2,500 of data re-entry. Source: Volume 15, Volume 4 of the Disaster Recovery Journal (DRJ).

Originally snapshots were a simple data protection technology. Snapshots have since evolved becoming ever more indispensable. End users can manipulate, create, replicate, and associate their data in new and novel ways. Snapshots provide a means for making data conform to new use scenarios without requiring permanent change to the data itself. Should the new uses prove productive and worthy of long-term retention, snapshots can be converted to permanent data storage. Snapshots are also useful for avoiding version skew when backing up volatile data sets, such as tables in databases or the folder store of a mail server. Snapshots may be either a duplicate or a copy of the dataset it represents. A “version” of a persistent dataset is effectively a snapshot.

Extending Data Protection with Virtual Logical Drives

A snapshot logical drive is a virtual point-in-time image of a source logical drive. It is the logical equivalent of a complete physical copy, but is created much more quickly and requires less disk space. Snapshot logical drives appear and function as standard logical drives. They are host addressable and can be read or copied to create a real copy of a point-in-time. A snapshot, through its copy-on-write technology, preserves data in its original form in the Overwrite Data Area.

Family Portrait

- **High Availability Means Continuous Operations and Uninterrupted Data Access**
Scalable Multi-path Failover for Continuous Access

Ensuring continuous access to critical data is imperative for organizations. IT departments increasingly require that RAID systems be available 24/7. Storage consolidation on Storage Area Networks (SANs) increases the risk of data loss to critical applications. Multi-pathing increases availability and mitigates risk by automatically using more than one path to a RAID system. StorView™ Path Manager delivers fault tolerance against single point-of failures in SANs and direct attached configurations. StorView Path Manager is designed to provide failover through the use of redundant physical path components — adapters, cables, and switches — between the server and Xyratex RAID system. In the event that one or more of these components fails, applications can still access their data. Xyratex RAID systems combine high availability via the redundant RAID controller configurations. The scalability of the Xyratex 5000 RAID family is further enhanced by multi-drive failover capability that enables data to be available from multiple drives in the event of drive failure.

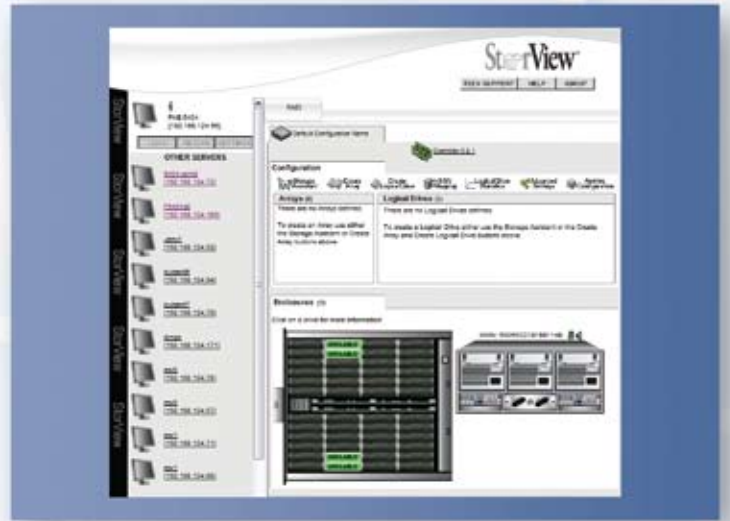
Data Integrity and Reliability

Every member of the RAID family delivers the highest levels of data integrity and reliability. More than 20 years of disk drive and storage subsystem development enables Xyratex to eliminate or mitigate rotational vibration and other mechanical effects which may induce failure or reduce drive performance. By combining our CERT system testing along with innovative airflow and thermal management schemes, Xyratex produces the industry's most reliable systems with the lowest power consumption per density on the market.

RAID



F6500E - Up to 24 Drives - 8Gb FC - SAS/SATA II RAID



StorView™ RAID Management



F6500E - Up to 24 Drives - 8Gb FC - 3Gb SAS - SAS/SATA II RAID

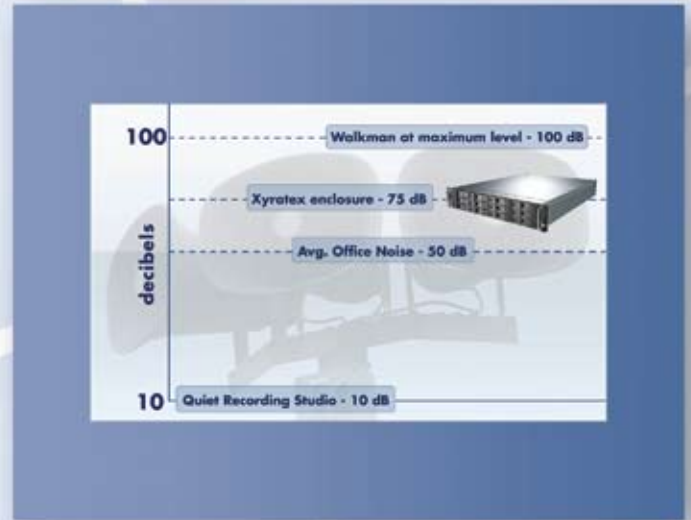


F5404E - Up to 48 Drives - 4Gb FC - SAS/SATA II RAID

Family Portrait

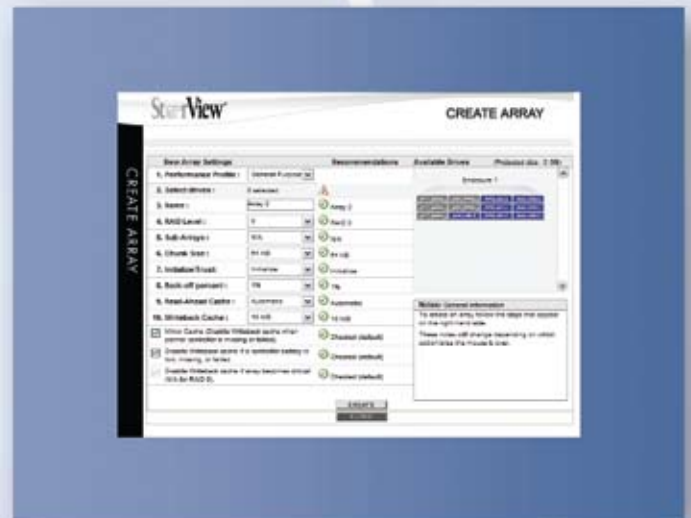
Flexibility and Efficiency to Meet Dynamic Needs

Acoustics are important! Reduced acoustical noise is attractive since it allows storage to be deployed in any environment. Acoustics control is a traditional Xyratex strength. At their acoustical peak, Xyratex RAID systems operate at just 75 decibels, enabling them to be deployed in any environment where quiet operation is required. Efficient cooling with fewer fans, well-designed internal enclosure thermal and airflow management all translate into lower acoustic noise and significantly better heat transfer with lower fan speeds.



Quiet storage = deployment flexibility

The RAID family is flexible enough to be deployed across a wide variety of environments with its ability to support 512 LUNs. Fine tuning storage capacity to meet individual deployment needs is important because it prevents over provisioning, manual adjustments to tailor the storage to application or workload needs and reduces the administration time required for deployment. The net result is fast, dependable, available storage with a lower cost of ownership. StorView Raid Management software enables administrators to quickly implement the exact configuration needed in their environments in the least amount of time.



Simplified storage management

About Xyratex

Xyratex is the ultimate partner to the storage industry. We are a leading provider of enterprise-class data storage subsystems and storage infrastructure manufacturing equipment & automation solutions. Working with over 50 A-list companies, Xyratex ships over 14% of the world's external storage capacity, and 75% of all 3.5" drives are processed using Xyratex test systems. With unmatched expertise and a history of innovation and technological excellence, Xyratex delivers products which are high-performance, energy-efficient and extremely reliable.

For more information, please visit www.xyratex.com

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