IBM System Storage N5000 series with Nearline storage

Storage designed for cost-effective, rapid-access backup and restore, online reference data and data protection

The challenge: Managing, protecting and providing rapid access to data
To compete successfully and address new regulations, organizations are managing more data, storing it according to its changing value as it ages, and implementing comprehensive data protection strategies—each of which brings new challenges.

Data management challenges include providing access to e-mail and document archives for business and regulatory compliance reasons. They also include matching storage capabilities and costs with information lifecycles, which requires implementing solutions for hierarchical storage management and data migration.

IBM System Storage N5000 series with Nearline storage
Designed to provide effective and economical data protection and rapid recovery

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**Highlights**

- **Wide range of supported capacities designed to help organizations implement and/or enhance their secondary storage infrastructures**

- **Scales from 3.5TB up to 168TB of physical capacity to support business growth and change**

- **Designed to offer low storage acquisition costs, high reliability and ease of administration to help reduce storage TCO**
The backup and restore aspects of data protection raise concerns about how to reduce the high total cost of ownership for tape storage and how to successfully restore data from tape. Another aspect of data protection—multi-site replication—raises issues of bandwidth utilization and primary storage costs. To meet this range of challenges, organizations are looking for a solution that fills the price/performance gap between fast but costly primary storage and less costly but slow archival (tape and optical) storage.

The solution: Nearline storage

The IBM System Storage™ N5000 series with Nearline storage is designed to address those storage challenges by providing near-primary storage performance at near-tape storage costs. A disk-based, secondary storage device for enterprise applications, Nearline storage can help organizations complement and improve existing tape backup, archiving, and data protection schemes by inserting economical and simple-to-use disk-based storage between application storage and tape libraries in a three-tier storage architecture.

Nearline storage is designed to provide economical storage and rapid disk-based access to reference data to help address business and regulatory requirements. It can serve as a key component of a hierarchical storage management infrastructure by storing less-critical data on devices whose costs and performance stand between primary and tape storage, thereby helping to enable cost-effective data lifecycle management.

Nearline storage can help organizations enhance existing backup and restore operations by acting as a large data cache or by replacing tape backup devices. Combined with SnapVault®, Nearline storage is designed to function as a robust and fully integrated appliance that helps make data backup and restore operations rapid and reliable. In addition, because the total cost of ownership can be lower than primary storage and performance is better than tape, Nearline storage can serve as an economical, high-capacity storage device located remotely for multi-site replication programs.

Improve backup processes, fast data recovery

Backing up directly to Nearline storage and then to tape can help organizations enhance data protection management, improve primary storage and tape library performance, and reduce backup resource requirements and costs. Backing up to Nearline storage can potentially be faster and consume less application-server CPU processing power than direct backup to tape.

SnapVault software, which utilizes incremental block transfers to back up data to Nearline storage across a LAN or WAN, is designed to help reduce network bandwidth consumption. SnapMirror® software, which replicates data at high speeds over a LAN or a WAN, combines with Nearline storage to help support high data availability and fast recovery for mission-critical applications.

The high throughput and near-instant data access that Nearline storage is designed to deliver can lead to much faster data recovery than is typically possible with tape. Faster data recovery can help you restart your business more rapidly and reduce the business impact of unplanned outages.
Archiving for rapid access to reference data

Regulatory compliance

Nearline storage is designed to offer random, rapid access to e-mail and other records and documents. Because it scales from 3.5TB up to 168TB of physical capacity, Nearline storage has the capacity to help organizations economically store and retrieve business critical documents.

Business efficiency

By providing a low cost per megabyte of storage, Nearline storage is designed to enable organizations to store and effectively manage more data, helping to improve their ability to leverage accumulated organizational knowledge to work smarter and more efficiently.

Enhanced data protection

Nearline storage is designed to provide cost-effective, high-capacity secondary storage, which can support organizational efforts to increase the affordability of data protection strategies and speed disaster recovery. Nearline storage can even serve in emergencies as a primary storage device. Combined with SnapVault and SnapMirror software, in addition to the Snapshot™ technology, Nearline storage is designed to offer a comprehensive, cost-effective, highly reliable data protection solution.