



## **Network Appliance Breaks New Ground For Business Continuance with the NearStore R100**

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### **Management Summary**

**Disasters and interruptions to business activities do occur, and enterprises need a plan to recover their IT systems from a range of possibilities** – from a corrupted file all the way to the catastrophic loss of a data center. Ideally, one could purchase the most robust, highly-redundant systems, replicate them in multiple, reinforced-concrete data centers located thousands of miles apart, and connect them with fat, dedicated pipes. It could withstand anything, and might even make the Pentagon jealous! Such a system may offer the utmost in availability, but its cost is out of reach of most real-world IT budgets. Something more modest, though still effective, will have to do.

**The art of business continuance lies in assessing risks and achieving the right level of resilience without breaking the bank.** Fortunately, not all systems are equally important, so not all require the same level of protection. The key is to match each application or data set with an appropriately resilient business continuance solution. Mission-critical applications require real-time mirroring in a remote data center, while periodic tape backup, at a far lower cost, works for less important applications. **A comprehensive approach to business continuance requires a continuum of solutions with various levels of availability, recovery speed, and cost.**

**Network Appliance (NetApp) has staked out new ground on the business continuance continuum with the NearStore R100, a network-attached storage appliance for near-line backup consolidation and recovery.** This highly scalable appliance offers storage at an attractive \$0.02 per MB at a lower performance point than Network Appliance's enterprise-class filers. It is designed to be a central repository of near-line backup data – that is, supporting a time to recovery in between a real-time mirror with instantaneous fail-over, and tape backup that can require hours or even days for full recovery.

**NearStore does not obviate mirroring or tape, but delivers a new price/performance tier for backup and archiving.** It can be used to store that significant and large category of information that falls between mission-critical and non-critical in its degree of importance. It can also act as a temporary staging ground to allow hot data to cool before moving to tape, and it can even reduce the amount of data archived to tape. For enterprises, this means additional flexibility in creating realistic and effective business continuance solutions. Read on for more details about the *NearStore R100* and the new options it opens up for near-line storage.

### **IN THIS ISSUE**

- **Introducing the NearStore R100.....2**
- **Business Continuance Applications .....2**
- **Archiving Applications .....3**
- **Conclusion.....3**

## Introducing the NearStore R100

Network Appliance (NetApp) rose to prominence in the storage industry because of its successful line of network attached storage (NAS) appliances. **These specialized, high-performance “filers” consolidate and store Windows, Unix, and Web data by supporting open systems file sharing over an IP network.** Enterprises employ them as primary storage for a broad range of applications including file sharing, scientific, messaging, and database/ERP.

The *NearStore R100* is an extension of NetApp's line of NAS appliances. It runs the same optimized Data ONTAP operating system as the of enterprise filers and supports RAID<sup>1</sup> configurations for high availability. However, NearStore contains less expensive IDE disk drives instead of high-performance SCSI or Fibre Channel drives, hence the designation *near-line* instead of online. It is able to offer capacity at a lower price – roughly \$0.02 per MB – and lower performance point. It also scales to a massive 100 TB. **In short, NearStore is a larger, somewhat slower and less expensive cousin of the familiar enterprise filers and is suited for different purposes.** While enterprise filers are designed to be the primary storage for production applications, **NearStore is intended for secondary storage for applications, like backup and archiving.**

## Business Continuation Applications

The most significant application for NearStore is business continuation. Since unavailable IT systems and loss of data can cause significant financial losses for an enterprise, it is critical to build resilience into an IT infrastructure. **Three very critical components – redundancy, remoteness, and recoverability – comprise the foundation of resilient systems.** NearStore forges a new, mid-range tier of storage to support the three Rs of resilience.

*Redundant* copies of data help avoid downtime and prevent data loss. If a primary copy of data is corrupted or destroyed, a

secondary copy is available to resume operations. **NearStore is well suited for storing redundant copies of data because of its large capacity, network connectivity, and interoperability with popular backup and replication software packages,** including Veritas *Netbackup*, Legato *Networker* and *Replistor*, CA *BrightStor Enterprise Backup*, and Connected *TLM*, as well as NetApp's new *SnapVault* software for online backup. It can connect to multiple primary storage platforms, including NetApp and third-party vendors, over an IP network and become a central repository for redundant data.

Since NearStore supports the most popular tape backup software, it can store tape data for near-line recovery. **NearStore receives data faster than tape drives and can shorten an over-extended backup window – a common problem that prevents complete backups and/or degrades performance of production applications when backups run into peak business hours.** SnapVault and Replistor also allow incremental backups that minimize the performance impact on primary storage and replicate only the changed blocks to NearStore.. This delivers an efficient utilization of space. NearStore also facilitates more frequent backups, thereby shortening recovery time in the event of a restore. Furthermore, it can reduce the amount of data stored to tape by acting as a staging point for recent copies (e.g., two weeks' worth) and archiving less periodic copies to tape for long-term storage. Backups from NearStore to the tape run in the background and do not affect the availability of NearStore.

*Remoteness* extends the concept of redundancy by placing copies of data at facilities far enough away to be spared from local disasters. **NearStore can be located remotely and connects to primary storage via IP network connections,** which are commonly employed for metro- and wide-area networks. This is also known as electronic vaulting.

The third element of resilience is *recoverability* – the time it takes to recover from an interruption. In general, the more immediate the recovery, and more expensive it is to enable. A real-time mirror can provide nearly instantaneous fail-over, but it is also the most expensive because it requires redundant

<sup>1</sup> Redundant Array of Independent Disks

production systems. On the other hand, tape backup is a very inexpensive solution but can require hours or days to restore, especially if the backup process is manual.

**As a near-line storage system, NearStore offers mid-range recoverability at a medium price.** It is significantly faster than tape but not as fast as a real-time mirror. It is significantly less costly than enterprise storage but not as low as tape. **NearStore stakes out a middle ground in the continuum of business continuance solutions and gives enterprises more granularity for providing optimal levels of resilience.**

### Archiving Applications

NearStore is also useful for archiving. This function is different from business continuance – its main purpose is to improve application performance and lower storage costs by pruning infrequently-accessed records and files from databases to keep the size manageable. **NearStore offers a relatively inexpensive means to archive information while keeping it accessible in case it is needed.**

NearStore currently supports two archiving packages – IXOS *eCON Solution Suite* and Enigma *SmartMove*. Expect to see support for additional third-party software in the future.

### Conclusion

The NearStore R100 is a promising product because it meets a real customer need – near-line, networked storage at a lower price. **It cuts a new swath in the busy market of networked storage by delivering a unique combination of scalability, performance, and price.** This new point on the price/performance curve is optimal for backing up or archiving data of mid-level importance, thereby avoiding the dilemma of choosing between inadequate recoverability and an unnecessarily high cost for resilience. **For enterprises deploying business continuance or archiving solutions, NearStore R100 may be the right solution at the right price.**



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