

Leveraging the Power of Virtualization for your XenServer™ Applications

Highlights

- ✓ Easy integration with XenServer™
- ✓ Rapid deployment of XenServer™
- ✓ Single storage interface
- ✓ Efficient Storage Repositories
- ✓ Full support for FC SANs, SAS, SATA, iSCSI, NAS data storage
- ✓ VDIs optimized for performance, reliability, and capacity
- ✓ Direct connect LUN to VDI
- ✓ Citrix XenServer Certified

Virtualization is a key component in the development of the efficient data center. Servers, networks, applications, operating systems, and storage are all being revamped inside the data center to provide a more efficient and cost-effective business solution. Virtualization engines such as Citrix XenServer provide the technology framework to easily design, deploy, and manage these new virtual environments.

The consolidation of servers and server processing requires a concurrent commitment to provide the same level of optimization for data storage. However, in many circumstances and often due to heavy capital investments, storage remains unconsolidated. Storage systems acquired over the years tend to be re-used, as is, in this virtual environment. This presents several problems such as varied performance characteristics, mismatched capacities, insufficient data protection levels, and the most important issue of all: multiple vendor environments with proprietary administrative interfaces, non-uniform approaches to providing storage management and growth, diverse operational procedures and disruptive upgrades.

The answer lies in consolidating and optimizing storage for this new virtualized environment. Using the correct storage consolidation solution provides the ability for the enterprise to build high-performance, cost-effective computing environments to handle tomorrow's demands while dramatically reducing the use of yesterday's proprietary tools.

The RELDATA Solution

The RELDATA 9240i storage system is a state-of-the-art unified storage solution that provides expandable data storage for both block- (iSCSI SANs) and file- (NAS with multi-protocol NFS and CIFS) based data. Access to physical storage is provided through a variety of communications protocols such as Fibre Channel (FC), SAS, SATA and iSCSI.

The RELDATA 9240i system provides a single storage interface to XenServer by consolidating available storage into Storage Repository (SR) pools. The RELDATA system virtualizes multiple heterogeneous storage systems using a variety of block-level communications protocols to create these SR pools. In turn, XenServer creates Virtual Disk Images (VDIs) for use by XenServer VM hosts.

RELDATA's ability to virtualize storage provides the most efficient and optimal access to storage that streamlines the administration and enhances the performance of the XenServer virtualization platform.



Storage Efficiency

The 9240i system provides greater storage efficiency through allocating storage on-demand from one or more virtual storage pools representing different classes of available storage in terms of performance and protection. These Storage Repository pools are easily expanded by the addition of storage to the 9240i, both internal and external (third party). Each type of Storage Repository may host specific Virtual Disk Images (VDIs) that are assigned or mapped to VM hosts.

This allows optimal assignment of storage resources to overall XenServer requirements without the penalties of over-assigning storage from multiple discrete storage systems. Efficiencies derived from storage pooling by the 9240i continue indefinitely as storage can be connected and disconnected without disruption to VM applications.

Storage Performance

The 9240i Unified Storage System offers industry-leading performance with both block-level (SAN) and file-level (NAS) protocols.

In many situations, it may be necessary to directly assign storage resources to a particular application, workstations or users working in a modern virtualized environment. The 9240i system provides the ability to define the capacity, level of performance and data reliability level for a given LUN and provide it directly to workstations users or hosts.

It is this ability to directly connect 9240i storage objects that provides dual benefits: unburdening the hypervisors from heavy I/O traffic and gaining headroom for more virtual system performance while eliminating an extra hop between the VM host and the data - reducing latency penalties.

Lower Storage Costs

The 9240i with its complement of iSCSI, and NAS data storage capabilities eliminates the need for separate and costly NAS gateways and storage virtualization appliances. As such, 9240i combines storage and virtualization in a single box.

Drawing block- and file-level storage from a common pool eliminates the costs of over-provisioning. For example, storage capacity consumed by a LUN that is no longer in use can be easily returned to the pool and allocated as a filesystem. Such transformation is not possible with traditional separate SAN and NAS storage systems.

Similarly, common pools enable deployment of congruent data protection strategy for both block- and file-level repositories. Advanced replication methodologies come pre-packaged with the system and can be enabled at any time.

In addition, the ability to virtualize storage from different vendors lowers the total cost of storage provisioning by the re-use of existing storage assets. In turn, virtualized storage becomes Storage Repository pools.

Storage Convenience

Eliminating the multiple proprietary vendor management interfaces through the use of a single 9240i GUI reduces the complexities of administering storage. The process is further simplified by the presentation of a single storage system to the XenServer environment.

The flexibility of the 9240i admin interface and adaptive storage wizards offer a rich variety of options for combining internal, external and remote storage components into a robust and reliable platform for XenServer needs, while keeping the management tasks simple and easy to follow.

Dealing with a single vendor for all storage needs streamlines the administration and speeds up support inquiries.

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