



Value-Centric Storage

An Enabling Platform for Doing More at a Lower Cost

In today's fast moving competitive business environment, companies and their IT managers are faced with not only growing volumes of data but the harsh reality of ever-increasing budgetary pressures. The mantra of “doing more with less” has become a recurring, underlying theme in the lives of storage and IT professionals around the globe. Mounting financial pressures have resulted in reductions of manpower with the potential for increased risks to data management and data protection practices compromising business continuity. To effectively manage these risks and to optimize the manageability, expense and performance of their IT infrastructure, organizations must now reassess the potential return on investment (ROI) of their storage systems and look for new ways to unlock the “value” of their storage investments.

Challenge: Efficient use of storage resources

Efficiency and ROI have become primary considerations – the efficient use of storage resources, consolidation of management, and the utilization of more cost effective storage media and networking protocols all contribute to a storage infrastructure that can help align expenditures with business needs while reducing operational costs. Expenses incurred from storage management or building disparate islands of technology with unnecessary redundancies within the organization could all be reduced by implementing intelligent, value-centric storage systems that offer improved consolidation of separate devices with integrated enterprise-level features at an affordable price. The intrinsic “value” in a storage system is based upon delivery of ever-increasing levels of automation, reliability, performance, ease-of-use and return on investment. The value-centric storage system uses integrated software in a tightly coupled configuration which takes advantage of the internal RAID controllers to provide data protection features demanded by IT managers at a price aligned with today's economic pressures.

Solution: iQstor offers “value”

iQstor has developed a series of intelligent storage systems that offer promising opportunities for businesses to simplify storage management, improve ROI and hone their competitive edge. iQstor's value-centric storage systems provide the opportunity for transforming the way IT is used and leverage it more strategically in order to reduce cost. By simplifying their storage solutions, IT managers achieve better efficiency without compromising on performance. iQstor storage systems, such as the iQstor



iQ2850 iSCSI SAN, incorporate multiple cost-optimizing technologies including storage virtualization, iSCSI connectivity, consolidated data protection, unified SAN management, high capacity and lower cost disk drives.

The integrated array-based iQstor storage services features including virtualization, snapshots, volume copy and remote replication significantly enhance the productivity of IT managers in a consolidated storage environment. By virtualizing storage pools, iQstor storage systems significantly decrease the cost of storage hardware through efficient storage allocation and increased disk utilization. Storage services such as snapshot and remote replication enable business continuity and disaster recovery which provides significant “value” to IT managers.

Storage virtualization has also emerged as one of the most prominent approaches for optimizing storage management and storage resources in a way that maximizes their efficiency to the business. Storage virtualization offers businesses a number of advantages including availability, scalability and efficiency through better utilization of storage resources.

The best value-centric solution is iQstor’s iQ2850 iSCSI SAN storage system. With a feature-rich platform that delivers on the promise of storage virtualization, it offers businesses a simple solution and reduces the complexity and cost of managing SAN storage

iSCSI and Fibre Channel

Traditionally, SANs have been built mostly around Fibre Channel, a protocol used in equipment that’s expensive and thereby affordable mainly by large corporations. Because iSCSI SANs are based on the Internet protocol, the equipment used to build the network infrastructure is far less expensive. Also, many companies find iSCSI SANs to be simpler to manage compared with Fibre Channel SANs because it uses familiar IP commands and Ethernet components. Managing storage devices, whether using an iSCSI or a Fibre Channel network, remains the same. Moreover, iSCSI is much less expensive than Fibre Channel to deploy and offers big advantages over the other alternatives: internal storage, direct attached storage and network attached storage.

Challenge: Storage for Virtual Infrastructures

Virtualization is having a major impact across data centers and the IT industry as a whole specially in terms of storage capacity requirements, storage utilization and thus storage costs. Virtualization dramatically improves the efficiency and availability of



resources and applications by separating workloads and data from the functional details of the physical devices on which they are hosted. Virtualization increases the flexibility with which the workloads and data can be matched properly to the physical resources; it enables administrators to develop business-driven policies for delivering resources that are appropriate given specific time, cost, and service-level requirements. It is rapidly transforming the IT landscape and changing the way organizations compute.

Organizations routinely achieve server consolidation ratios of 10-to-1 or more using virtualization. Consolidating servers with virtualization enables administrators to reduce the number of physical machines, but it rarely covers the storage required to address the demands of these virtualized environments. To effectively support and leverage the capabilities of virtual infrastructures, not only storage must be shared and easily accessed via the network, but must also maintain high performance rates, be highly available, and be easily scaled without affecting applications or limiting performance as workloads change and grow. With VMware fast becoming a popular tool for virtualizing and consolidating physical servers and their operating systems, IT managers look for storage systems that are fully interoperable with VMware virtualized environments.

Solution: iQstor iQ2850 offers “value”

The iQstor iQ2850 offers a powerful virtualized storage platform for VMware customers requiring enterprise-class data protection with full redundancy and remote-site disaster recovery capabilities. Simplifying integration and accelerating migration into virtual environments, the iQstor iQ2850 enables IT managers to leverage a simple, flexible virtual storage solution that can scale easily and affordably to meet changing business requirements.

For mid-tier customers, where direct attached storage (DAS) is the dominant IT resource, the iQstor iQ2850 provides a highly scalable feature-rich iSCSI storage system that enables IT administrators to accelerate the adoption of a SAN paradigm while minimizing both the capital expenditure and operating expenditure costs associated with SAN adoption. By leveraging existing Ethernet infrastructure and not burdening system and storage administrators with the need to learn how to manage new specialized host adapters and switches, IT administrators can realize all the benefits of a SAN at an affordable price. Moreover, IT administrators can immediately begin to garner a positive return on investment (ROI) with the iQ2850 by delivering key business benefits, including storage consolidation, increased storage utilization, on-demand policy-based storage provisioning, and higher data availability.



More importantly, system and storage administrators can leverage storage virtualization as a foundation for the delivery of critical data management services for business continuity. Through snapshot creation, backup, and replication, the benefits of storage virtualization can be extended well beyond direct improvements in storage utilization and higher productivity for IT administrators. By addressing key business application issues, such as data availability for service level agreements (SLAs), storage virtualization becomes a CIO tool for increasing competitiveness.

The iQ2850 iSCSI storage system fits perfectly into any SAN adoption or expansion initiative by offering enterprise-class reliability and availability needed to support the central role of storage virtualization. Sporting fully redundant, hot-swappable components, the iQ2850 includes RAID controllers, power supplies, and cooling modules. What's more, the volume of site storage can be expanded with the iQ2850 in a number of ways not available with Dell's EqualLogic PS series, which require the addition of more full-featured storage arrays. The iQ2850's internal FC loop topology supports connection of up to 240 drives. For archival applications, such as D2D backup, iQstor's JBOD expansion fits site I/O traffic patterns and requirements, while being highly cost-effective.

The Bottom Line: What value-centric storage means to business

Efficient management and protection of company's data is essential for midsize enterprises to successfully compete with larger competitors in today's market conditions, as everyone looks for "value" while making their purchase decisions.

iQstor storage systems enable IT managers to:

- Support advanced data services such as replication and data migration to improve data protection, availability and recovery across consolidated storage and server environments
- Enable greater application availability and improved performance
- Reduce current and future costs of managing and expanding storage capacity by offering an affordable solution to midsize enterprises
- Scale capacity and configuration while providing a reliable and fault tolerant foundation