iQ1000

Overview

The iQ1000 Storage System ensures high availability by utilizing fully redundant, hot swappable components for disk drives, power supplies, cooling modules and the Storage System components.

iQstor's iQ1000 Storage System is a self-contained storage system that brings an intelligent and highly-available solution to address the data needs of small and mid-sized companies.

The iQ1000 combines proven enterprise-level features such as storage virtualization, snapshots, mirroring, remote replication, storage provisioning and automated capacity growth with fully redundant Fibre Channel disk drives. The iQ1000 also delivers storage scalability, data protection, storage automation and plug and play simplicity -at a price point that's dramatically less than competing Fibre Channel solutions on the market today.

iQ1000 enables storage administrators to quickly and cost-effectively optimize its embedded data services intelligence for applications and network environments in financial, legal and educational institutions. It delivers investment protection, cost-effectiveness and reliability for businesses that need a robust Fibre Channel solution with the availability, manageability, data integrity and enterprise-level functionality that are required in data centers today.

Each iQ1000 supports up to fifteen Fibre Channel drives that provide 2.2TB of storage capacity, and this capacity can by easily and dynamically scaled to 17.6TB (with 146GB drives) by attaching an optional J1000 JBOD enclosure to the storage system. Additionally, as management requirements evolve, administrators have the option of enabling the on-board enhanced storage services features.

The iQ1000 is a full-featured 2Gb storage system, providing maximum flexibility, scalability and reliability for business, large and small. With all key internal components being hot-swappable and redundant, the iQ1000 ensures dependable data protection and delivery to help keep business-critical applications running smoothly.

iQstor SAN Manager

From its inception, the iQ1000 has been designed to allow your business to intelligently manage, virtualize and protect your valuable data. Starting with iQstor's SAN Manager, a centralized policy-based tool that allows you to dynamically configure and manage a SAN, each iQ1000 comes equipped with embedded data services software that is easily activated to solve your business requirements. These data services management software features include:

Volume Manager based Virtualization (VMV)

Using iQstor's VMV technology allows SMB/SMEs to achieve significantly improved economies of scale and operational efficiencies, while delivering superior service to their customers. VMV offers small to mid-size business (SMB) and small to mid-size enterprises (SME) many benefits, including the ability to easily consolidate storage resources, reduce complexity, provision storage on demand, and create multiple virtual arrays from a single system. With VMV, users can easily add cost-effective diskless servers or new servers with different operating systems and different applications in a single consolidated storage array with no downtime.

With VMV, IT administrators can easily and efficiently allocate storage based on needs of users and applications with flexible, intelligent and non-disruptive storage provisioning. They can quickly consolidate and optimize storage resources to maximize capacities, allowing effective data storage management with less manpower, reducing costs. They can add or expand additional storage space by creating virtual disks in a non-disruptive manner; all bringing workflow efficiencies and cost savings to today's business.

The result is enhanced storage utilization, increased reliability and security and improved administrator efficiencies.

Managed Snapshot Services (MSS)

iQstor's Managed Snapshot Services (MSS)provides quick and easy virtual duplication of your critical data -at your fingertips when you need it. Using MSS, you can maximize the limited backup windows available for today's 24x7 business applications with non-disruptive snapshots that ensure data availability, require fractional space (typically 10%to 20%compared to a full copy) and enable a zero-backup window full performance backup. With MSS, businesses can easily verify functionality, reliability and accuracy of modifications to production -without impacting production data -by instantly creating writeable test databases that require little space and serve to improve accuracy of application testing. iQstor's MSS feature can also provide a solution by making the snapshot image immediately available for situations where production data has been accidentally corrupted.

MSS is especially useful for applications requiring near-instantaneous point-in-time virtual copies of the data. MSS offers users the ability to access their data from any point-in-time without having to stop their daily activities for routine tasks such as system backups.

Volume Copy Services (VCS)

iQstor's Volume Copy Services (VCS)feature provides a comprehensive replication solution within the iQ1000 storage system. VCS creates a duplicate physical copy of a volume (vdisk) to effectively manage information growth and data protection.

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The volume copy is an independent vdisk that can be assigned to any host or application without affecting the performance of the original production volume. With VCS, companies have an excellent tool for decision support, system analysis, and application testing, bringing an exact physical duplicate of source data for single or multiple users.

To reduce costly interruptions to production volumes while making a backup, VCS can be used to split the mirror. The backup application will then use the copy volume to create the backup. Once the backup is complete, the split-mirror can be synchronized by updating the volume copy with any changed made to the original volume.

VCS, like other iQstor data services features, is storage controller-based and does not impact the operation of user applications by requiring host interaction or CPU processing. Once the copy process is complete, the user can map the copy volume to any host and start utilizing it immediately.

Intelligent Capacity Management Services (ICM)
In today's data center environments, the storage system's ability to automatically expand the virtual disk space to accommodate fi le system growth is one of the key IT requirements for continuous data center operation. To achieve the goals of 24x7 system uptime and storage availability, iQstor's Intelligent Capacity Management Services (ICM) allows continuous monitoring of storage consumption to easily prevent the system from running out of storage space.

The intelligent policy-based management component of ICM allows the data center administrator to automate fi le system and disk partition processes, setting thresholds and policies to provision capacity from one or more storage pools without server interruption. This intelligent process eliminates costly downtime associated with traditional physical disk upgrades and with re-building and re-formatting operating system partitions that are due to unforeseen changes in storage requirements, bringing workflow efficiencies with lower TCO and higher ROI.

Remote Replication Services (RRS)
Addressing business continuity requirements for off-site files (data vaulting) where data is protected from various failures and threats, and real-time replication of critical data between multiple storage arrays (disaster recovery) are two common problems SMB/SME IT operations must resolve in a cost- effective manner. With iQstor's Remote Replication Services (RRS), the ultimate solution for disaster recovery, companies can restart mission-critical applications immediately after a primary site disaster, bringing critical activities back online. Using RRS, administrators have a cost-effective and flexible solution for business data synchronization between local and remote volumes (both synchronous and asynchronous) that allows IT personnel to easily create an exact copy of a volume. Administrators can then assign that copy to an application server for immediate use -making the process of moving and using data from external sources a straightforward and efficient process.

Similar to other iQstor data services features, RRS is storage controller-based and does not impact the operation of user applications. Once a volume is replicated to a remote site, the user has immediate access to the remote data for application testing, backup and recovery.

Specifications
Host Interface Four 2Gb Fibre Channel interfaces, 200MB/s each (800MB/s total)
Storage Controller Single or dual
Cache Memory Up to 2GB per storage controller
Cache Protection Enterprise-level cache vaulting and active cache scrubbing
Parity Hardware parity accelerator to boost RAID performance
Number of LUNs 1024

Storage System Features
Standard Volume Manager based Virtualization (VMV)
RAID levels 0,1,3,5 and 1+0
On-line RAID expansion
Multiple RAID sets
Multiple LUNs
Hot-swappable disk drives
Global hot spare disks
Automatic drive failure detection and rebuild
Automatic reallocation of bad sectors

Optional Managed Snapshot Services (MSS)
Volume Copy Services (VCS)
Intelligent Capacity Management (ICM)
Remote Replication -Synchronous (RRS)

Drive Interface
Number of Disk Drives Up to 15
Interface Dual (up to 120 HDD) or single (up to 240 HDD) FC-AL back-end loops
Capacity/Form Factor 36/73/146/300GB; 3.5 ", 1 " high
Maximum Capacity per Enclosure 2.2TB with 146GB drives
Maximum Capacity per Subsystem 17.6TB with 146GB drives

Power Specifications
AC Input 90-260 VAC, 47-63 HZ, auto-ranging, PFC
DC Output Dual 400 watt, redundant

Operating Environment
Temperature 10 º C to 40 º C
Relative Humidity 20%to 80%
Certification FCC/CISPR 22 Class A, BSMI, UL/CUL, CE

Dimensions
Rack Mount Unit 5.219 " H x 17.56 " W x 24.50 " D, 3U EIA high (19 " rack mount)

Weight
Rack Mount Unit 42 kg. (93 lbs.)

Software
iQstor SAN Manager Local or remote management, monitoring, configuration and call home
Host Platform Support Microsoft Windows, Linux, Sun Solaris, IBM AIX and HP-UX

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