Quantum.

Guardian™ OS

FEATURES AND BENEFITS

- **Multi-platform File Sharing.** Delivers support for heterogeneous Windows, UNIX/Linux and Macintosh environments, enabling fast, seamless deployment and integration into your existing infrastructure.

- **Active Directory Service.** Provides compatibility with evolving network environments, minimizing administrative impact.

- **Snapshot Technology.** Allows non-disruptive backups and immediate recovery of data, making data protection faster and easier.

- **Journaling File System.** Enables quick restarts. Provides high-performance file system for transaction-oriented environments.

- **Backup Express for Guardian Software for Local Tape Backup.** Simplifies remote office/site backup and reduces network traffic.

- **Backup Agent Support.** Integrates easily into your existing backup strategy. Helps speed backups to reduce backup window.

- **UNIX Network Information Service.** Supports authentication from UNIX/Linux servers.

- **Group Quotas for UNIX.** Simplifies management of large groups in UNIX environments.

The Guardian OS is enterprise-ready software, designed to provide reliable, robust file storage for your business-critical data in today's demanding heterogeneous environments.

Manageability

Administration and management are cornerstones of Quantum's Network Attached Storage (NAS) servers. The Guardian OS continues to expand those capabilities by providing support for Microsoft Active Directory Service (ADS) and UNIX Network Information Service (NIS) to allow easy integration into those environments. In addition to user quota management for Windows, UNIX/Linux and Macintosh, the Guardian OS also supports group quota management for UNIX/Linux.

SNMP support allows easy integration into enterprise-wide environments via management tools such as HP OpenView and CA Unicenter.

Security

Security has been addressed with features such as Kerberos v5 authentication in Microsoft ADS and Secure Sockets Layer (SSL v3) support. File and folder security is assured through support of Access Control Lists (ACLs), which maintains access control at both the group and user level.

Data Protection

The Guardian OS provides a wide array of features focused on backup and recovery of data. Now featuring Backup Express™ for Guardian (for local tape backup), the Guardian OS also includes:
- Snapshot technology
- Backup agent support
- Dual Ethernet network connections
- PowerQuest DataKeeper software
- Server-to-Server (S2S) Synchronization software

The Backup Express for Guardian software utility is pre-installed on every Guardian server with single tape drive support at no additional cost. The drag-and-drop GUI allows you to easily control data backup and tape management, providing complete flexibility, including full backup, incremental backup and unattended operations. Designed for multi-platform enterprise environments, Backup Express for Guardian supports single tape drives and automated tape libraries—from entry-level units to larger libraries with 100 slots—and is compatible with all popular storage media types.

The Snapshot technology allows a consistent, point-in-time copy of data without administrator intervention or time-consuming restores from tape at one-tenth the space requirements. Online volume backups are non-disruptive, background operations that avoid server downtime.

The Guardian OS supports VERITAS NetBackup/Backup Exec, Legato NetWorker and CA BrightStor ARCserve remote push agents that significantly improve backup performance.

The Guardian OS utilizes dual Gigabit Ethernet technology to support stand-alone, load balancing and failover network bonding modes. Stand-alone mode is customarily used in multi-homed environments in which network storage resources must reside on two separate subnets. Load balancing mode enables the even distribution of network traffic across

multiple network interfaces for optimal network performance. Failover mode, the shipping default, enables one network interface to operate as a backup for the primary interface and is used for high availability.

Every Guardian server includes—at no charge—an unlimited user license of PowerQuest DataKeeper client software for automatic backup of Windows files. Laptop files are backed up locally while disconnected from the network and then are automatically saved to the Guardian server when the laptop is reconnected to the network.

Also included at no charge is Quantum's Server-to-Server (S2S) Synchronization software, which enables one or more Quantum NAS servers to synchronize its contents with one or more Quantum NAS servers. This data replication software fits into an overall backup strategy to enable quick disaster recovery.

Expandable

The Guardian OS provides a foundation for the development of applications based on Java technology. These applications can enhance the capabilities of a Guardian server as a file server or transform it into a dedicated application server appliance.

With over 100,000 NAS servers shipped, Quantum is the clear NAS market leader. Now, with the Guardian OS, that leadership is extended with features that make storage simpler, more affordable and more robust.

GUARDIAN OS HIGHLIGHTS	
Feature	**Benefit**
Multi-platform File Sharing Support • Network Protocols: Microsoft Networks (CIFS), UNIX (NFS v3), Apple (AFP), Internet (HTTP 1.1), File Transfer Protocol (FTP) • Network Client Types: Windows: 95/98/NT/2000/Me/XP Macintosh: OS 8.x, 9.x, X v10.x UNIX: Solaris 7, 8; HP-UX 11; AIX 4.3.3; SCO UnixWare 7.1.1; SCO OpenServer v5.0.5 Linux: Red Hat Linux 6.2, 7.2	Support for the most popular platforms allows fast, seamless integration into heterogeneous Windows, UNIX/Linux and Macintosh environments
Journaling File System	• Provides robust, log-based, byte-level file system for high-performance, transaction-oriented systems • Enables quick file system restart
Windows 2000 Support • Active Directory Service (ADS) • Kerberos v5 encrypted authentication • Dynamic DNS name resolution • Lightweight Directory Access Protocol (LDAP v3) client	Operates in both mixed mode domains (Windows NT and 2000) and native mode domains (Windows 2000 only) to provide compatibility with today's evolving network environments
Data Protection • Backup Express for Guardian software for local tape backup • Snapshot technology • Backup agent support • Server-to-Server (S2S) Synchronization software • DataKeeper Windows client coftware	Provides the choice of local tape backup or network backup, enables immediate recovery of lost data, allows non-disruptive backups and integrates into enterprise backup strategies to provide comprehensive data protection
Security • Secure Sockets Layer (SSL) • Secure Shell (SSH)	Support for encrypted browser-based communication, command line access enhances security
Enhanced UNIX/Linux Capabilities • Network Information Service (NIS) • Group ID (GID) • Group Quotas for UNIX/Linux	Supports authentication from UNIX/Linux servers and eases management of large groups
Management • Easy-to-use Web user interface • Supports SNMP MIB II and Host Resource MIB	Flexible management using our browser-based Web user interface along with network management tools
Pre-loaded Java Technology	Supports applications that enhance a Guardian server's file serving capabilities or transforms a Guardian server into a dedicated application server appliance

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