

R2083Si Power NAS / iSCSI



High Performance NAS or iSCSI SAN

Compact Storage Capacity In Just 2U

Very High Speed RAID Engine

Enterprise Class SAS or SATA Drives

Quad Gbit Ethernet Interfaces

Simple and Easy to Setup and Manage



High Performance NAS or iSCSI Storage

- ▶ **Scaleable Storage** – Up to 8TBytes per unit. Provision storage capacity to multiple servers from one or more iSCSI target storage system. Add multiple iSCSI storage systems to expand storage capacity, simply and easily. Use as a NAS for shared storage applications with full support for Windows Active Directory
- ▶ **Low Cost Connectivity** – iSCSI provides all the advantages of direct attached storage, but uses standard Ethernet cables to connect to your host servers (Initiators). That means no high cost SCSI or Fibre Channel Interfaces are required on your server, just standard Gbit network cabling and low cost Ethernet ports are needed to build your storage area network.
- ▶ **Very High Performance**—Westeks POWER iSCSI systems provide very high sustained read / write performance, fully utilising all 4 Gbit Ethernet interfaces included as standard (expandable) using the latest hardware RAID engines.
- ▶ **Ultimate Data Protection**—Built in Data Replication and Snapshot features. Secure you data with real time data replication to a second unit on the same site. Recover accidentally deleted files or roll back to recover from a virus attack with the inbuilt data snapshot capability. RAID 6 support as standard means that you data is afe even in the unlikely event of two simultaneous disk failures.
- ▶ **Cost Effective** : No user licenses fees, low cost of ownership, and backed by Westeks excellent optional on-site support services.

Hardware Features

- ▶ Rugged 2U Rack Mount chassis
- ▶ 8 Hot Swap SAS Disk Drive Bays
- ▶ Redundant Hot Swap Power Supply
- ▶ High Performance Hardware RAID Engine
- ▶ Quad Gbit Ethernet LAN Interfaces
- ▶ Fast Processor NAS / iSCSI Engine
- ▶ RAID 5 and RAID 6 Data Security
- ▶ Hot Standby Disk Drive Support
- ▶ Automatic Rebuild Support



iSCSI Target Features

Standard Gateway Support

When used in business environments with structured networks, allows for remote management and optional data access via Intranet or Internet.

DHCP Server Support

The Dynamic Host Configuration Protocol (DHCP) is a communications protocol allowing network administrators to centrally manage and automate the process of assigning IP addresses in a network.

Secured Administration Access

Provides Secured Administration Access, requiring administrators to use SSL to access and configure the target. Allows users to assign different administrator rights to multiple administrators.

Multiple Network Connection Support

Supports the use of two or more network interfaces to access separate sub-networks. It also allows users to select the services to be enabled on a specified network connection.

Adaptive Load Balancing

Adaptive load balancing enhances performance by automatically routing data through several alternative network paths as application needs change.

Multi-Snapshot with the scheduling function

Multi-Snapshot with the scheduling function allows users to take a snapshot at a specified time (e.g., automatically every hour). If a user accidentally deletes or incorrectly modifies a file, he can still recover the data from a previous snapshot image.

Multiple Logical Volume Groups

Logical volume groups allow storage administrators to create logical storage pools that span multiple physical disk drives. The support of multiple logical volume groups makes it easier to meet the changing needs of users and applications while making the maximum use of available physical disk space.

Read Only LUN option

This function lets the user to set the LUN (Logical Unit Number) as a read-only device.

Volume Replication

By allocating one iSCSI target as the primary data storage device and the second as a destination iSCSI target, data will synchronously be written to both iSCSI targets using a dedicated network connection. The primary iSCSI target will be replicated in real time as in a RAID 1 Mirror, so that the data will be available if the primary storage system becomes unavailable.

Online Logical Volume Expansion

Online logical volume expansion allows administrators to change the size of storage volumes as needed without having to restart the application, recreate the volume, and back up and restore the data to the volume.

Multilevel Management

Integrated multilevel management capabilities allow the assignment of different levels of management rights to different storage managers. This allows, for example, some users or managers to monitor disk utilization for planning purposes without having the right to actually change or add actual storage volumes.

Network Client Support

Microsoft Windows, Linux, UNIX, Novell Netware 6.5, Apple OS X

Console Tools

The management console allows managers to monitor the status of the network, drivers and hardware, as well as to view information about memory usage. They can also control the Ping function, time settings, and DNS and DHCP configuration. Through the console, administrators can also change the language in which operate.

UPS Support

An uninterruptible power supply can be attached to the storage systems serial port. Supports the use of UPS to ensure the smooth shutdown of storage systems on the network in the case of a power failure. Using the SNMP interface for communication, the UPS-equipped server sends (or receives, if working in slave mode) the power failure signal and will shut down all servers in the network without the loss of data.

Email Notification

May be configured to send email alerts to the system administrator in case of problems with the iSCSI target.

Target Password Support

Allows set up password for targets to protect them from unauthorized access.

Multiple CHAP for target

Allows assigning multiple CHAP users that will be granted to access to the target. CHAP user authentication is by user name and password. Easily manage users that will have access to the targets.



NAS Engine Features

Web-based Graphical User Interface

The powerful and convenient Web-based GUI (Graphical User Interface) makes remote management of the NAS server a simple task. By using a web-browser, the server can be easily managed from anywhere in the network.

Remote Access of Console Tools

Supports remote access of the console tools, enabling the management of the NAS by the console tools from anywhere in the network.

Secured Administration Access

May be accessed and configured by the web-based, password-protected GUI over Secured Administration Access (SSL - Secure Socket Layer).

Console Tools

The NAS system may be managed by using the console tools. For security reasons some advanced and critical administrator tasks like, removing and restoring volumes, checking and repairing the file system, can only be managed from the console. From the console tools, the NAS server can monitor the status of the network, installed drivers and hardware, memory usage and others.

Email Notification

Administrators will be automatically alerted by Email, in the event of a technical failure of the NAS server.

Multiple Management Levels

Administrators can be assigned different rights with support for three levels: Full Access, Maintenance and Administration.

Windows Active Directory / Primary Domain Controller

Supports ADS (Active Directory Service), PDC (Primary Domain Controller), LDAP (Lightweight Directory Access Protocol) and ADS & NIS (Network Information Service) User-/Group ID Synchronization to leverage information about users, groups, systems and other resources stored in the Active Directory. The support of Access Control List (ACL) ensures that access rights of users are automatically taken over from the Domain.

External LDAP

Supports external LDAP (Lightweight Directory Access Protocol) servers to enable users to configure and administer multiple NAS systems from one single point.

Support for Network Information Service (NIS)

The NIS directory service protocol enables the distribution of system configuration data such as user and host names between computers on a computer network for easier and consistent access of information stored on any other NAS.

File System With Journaling Support

The support for journaling makes the file system more reliable and allows easier, faster recovery from unexpected shutdowns.

User and Group Quota Control

Users with large disk requirements can be constrained either by assigning them a dedicated share or by restricting their individual usage through individual user quotas or to assign a quota on a group to which the user belongs.

DHCP Client

By using the support of Dynamic Host Configuration Protocol (DHCP) the process of assigning IP addresses in a network can be centrally managed and automated.

Supported Network Clients

Supports the file based protocols CIFS (Common Internet File System)/SMB (Server Message Block), NFS (Network File System), FTP (File Transfer Protocol), Secure FTP and Apple Talk enabling Windows, Linux, Unix and Macintosh clients to share data on the same NAS server.

Antivirus

integrated Antivirus software tool for scanning shares on viruses at predefined points in time. The Virus Definition Database can be updated and is stored on the NAS device. Supports Online Scanning of files transferred via the Enterprise and FTP protocol.

SNMP (v2 & v3)

Supports the SNMP (Simple Network Management Protocol) protocol for NAS system monitoring purposes. .



NAS Engine Features Continued

S.M.A.R.T. Support

Includes S.M.A.R.T.(Self-Monitoring, Analysis and Reporting Technology) for detecting and reporting the status of the HDDs to anticipate failures. May be configured to send Email alerts to the system administrator in case of any problem with the hard drive units.

iSCSI Initiator

Has a built in iSCSI Initiator for easily expanding the storage capacity of the NAS system. New units and logical volumes can be added by connecting an iSCSI storage system to the NAS.

Multiple Network Interface Support

Supports usage of 2 or more network interfaces to access separate sub-networks. It allows administrators to select services to be enabled on a specified network connection.

Backup-Agents (Veritas, EMC Dantz, CA BrightStor)

Backup agents help administrators to back up NAS servers with backup software from Veritas, Dantz, CA BrightStor ARCserve. Using the backup agents, you can administer complete data protection for all data stored on the NAS server. This improves data transfer and provides network security, task monitoring, real-time directory browsing, and cross-platform backup support. Other backup software can do the backup and restore over supported file protocols.

Local Backup on Dynamic Units

Local storage can be defined as a Dynamic Unit. On this Dynamic Unit you can backup the NAS server and store the backup separately. The Dynamic Unit can be removed without shutting down the server and acts like a normal tape drive.

Cross Data Synchronization

Synchronize files and directories from one NAS server to another. The data transfer is block- based in order to minimize network traffic. Synchronization can be used for disaster recovery or Disk-to-Disk backup purposes. The two NAS systems may synchronize data in both directions: the NAS server can be the source and destination of files at the same time, allowing to cross-backup data on several servers. One NAS can be a destination for data transfer from another NAS system.

Support for over 2TB physical and logical volumes

Supports Logical Volumes greater than 2TB. As well, use physical volumes (e.g. RAID units) greater than 2TB.

Snapshot

Snapshot is an immediate point-in-time image of the logical volume (LV). The snapshot image can be used for both consistent and temporary backup, while users still have uninterrupted and complete access to the LV. Also, if a user accidentally deletes or incorrectly modifies a file, that file can be recovered from a previous snapshot image. Supports Multiple Snapshot with Scheduling to create snapshots at predefined points in time (e.g. Automatically every hour).

Multiple Logical Volume & Groups

Logical volume groups allow storage administrators to create logical storage pools that span multiple physical disk drives. With its support of multiple logical volume groups, the NAS makes it easier to meet the changing needs of users and applications while making the maximum use of available physical disk space.

Online Logical Volume Expansion

Online logical volume expansion allows administrators to change the size of storage volumes as needed without having to restart the application, recreate the volume, and back up and restore the data to the volume.

Support for Online Capacity Expansion

This feature supports a RAID controllers capability to increase the size of existing units without removing your data.

UPS Support

Uninterruptible Power Supply (UPS) eliminates the effects of a temporary power outage and provides safe shutdown, without loss of data, in case of power failure. The UPS device can be connected by COM-port or USB to the NAS server. The NAS is capable of using the SNMP (Simple Network Management Protocol) interface for communication with other SNMP-enabled NAS systems or servers for a smooth server shutdown in case of power failure. The server with UPS sends the power failure signal through the network to other servers (in slave mode) and will shut down all servers in the network.



Data Capacity

The R2083Si iSCSI and NAS RAID storage system supports up to 8 hot swap SAS or S-ATA II disk drives including 146GB, 300GB and 450GB SAS models and 250GB, 500GB, 750GB and 1TB SATA models. Each system is configured with disk drives, the RAID built to your chosen specification including any hot spares and fully tested prior to shipment. With 8 x 450GB high performance SAS disk drives fitted, the unit provides a raw capacity of 3.6TBytes which in the recommended RAID 6 configuration provides approximately 2.7TBytes useable capacity less formatting.

Specification

Hard Drive Interface	8 x 3GBits/Second SAS / S-ATA II Channels, Hot Swap Carriers
Data Interface	Quad Gbit Ethernet (copper) RJ45 as Standard Supports all standard iSCSI initiators including Microsoft Windows, Linux, UNIX, Novell Netware 6.5, Apple OS X and VMware
RAID Engine	Ultra High Performance 8 Channel 64 Bit H/W RAID Controller RAID level 0, 1, 3, 5, 6, 30, 50, 60 or JBOD MAID, Disk Roaming, Dynamic Expansion, Hot Spare and Auto Rebuild Up to 650MBytes/Second Sustained Read / Write Up to 50,000 I/O per Second Performance
iSCSI/ NAS Engine	Embedded Firmware iSCSI Target and NAS Engine Multi-Core Processor Engine
Cooling	Four x 80mm Integrated Replaceable Redundant Fan Modules Front Mounted (Blowers). Air Flow Front to Rear
System Monitor	Alarming on Fan Speeds and Temperature Disk and RAID Fault Monitoring and Remote Alerting Remote RAID Management GUI over Ethernet
Power Supply	Dual Redundant Load Sharing AC Power Supply with Dual Power Cords Auto-ranging 100 to 240 Volts AC +/-10%, 47Hz to 63Hz Power Consumption 350W typical
Environmental	Operating +10 to +35 deg C Recommended 18 to 22 deg C Storage 0 to +60 deg C Humidity 10 to 85% Non-condensing
Physical	Weight 16Kg (excluding hard drives) 2U 19" rack, 483mm Wide x 88mm High x 674mm Deep
CE Compliance	Conforms with EEC Directives on EMC & Safety Designed to Meet UL and FCC Requirements

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