USS 3.0

Unified Storage Server

Unified SAN + NAS Solution

NOW SUPPORTS TIERED CACHING

All software necessary to instantly convert any 64-bit Intel- or AMD-based system into a Unified Storage target.

Applications

- SAN Storage Arrays
- NAS Targets
- NAS/SAN Integration
- Remote Mirroring
- Virtualization Applications
- Data Warehousing
- Video Storage
- High performance computing
- Databases
- Archiving

Chelsio's Unified Storage Server is a powerful turnkey solution for creating high-performance storage systems. It is an integrated solution that is best-of-breed in the market, and provides an easy integration path for VARs and OEMs, and offers state-of-the-art performance and ease-of-use for end users.

Chelsio's Unified Storage Server includes a wide array of features that simplify file serving and the Back up and replication of valuable data that makes it the choice for dependable, reliable, and scalable storage.

Key Features and Benefits

Deploy storage systems in minutes! The first-time setup wizard makes it simple to connect to the network, define local workgroups, add users, create shares, and select file sharing protocols.

Plug-and-play - Integrates easily into VAR/OEM's hardware platform, ensuring smooth storage system integration. Comes as a bootable flash memory or loadable software. Fully compatible with most AMD64/EM64T multi-processor systems.

Ease-of-use - in deploying and reconfiguring of the storage array – Unified Storage Server has an intuitive web-based management interface, which is accessible in any compatible web browser, over an encrypted secure connection, providing ease-of-use and requiring minimum training.

Lower ownership cost - Consolidating multiple file servers and iSCSI SAN onto a single device reduces server management overhead and associated IT staff costs. Network storage can be remotely managed using a Web-based user interface, simplifying maintenance and providing centralized control of processes like backups, restores, and upgrades.

Feature rich - All storage needs over 1/10Gbps and supports NFS, CIFS, NAS, iSCSI Offload, TCP Offload, FTP, NFS-iWARP, Lustre-iWARP, Remote Mirroring, iSNS, Backup, Easy Management features. Also supports iSCSI Scaling, High Availability features with Live Migration and Nested RAID, Lustre over RDMA, and extensive self-test, stress test and remote test capabilities.

New features - USS 3.0 implements a two-tier cache of RAM and PCIe SSD. Support for HA cache coherency. The caching engine supports file and block access, and caches both reads and writes. It is optimized for supporting high speed low latency 10GbE clients with high throughput and high IOPs requirements. It integrates with the USS storage stack which provides dynamic storage provisioning with thin provisioned volumes, snapshots, and volume cloning.

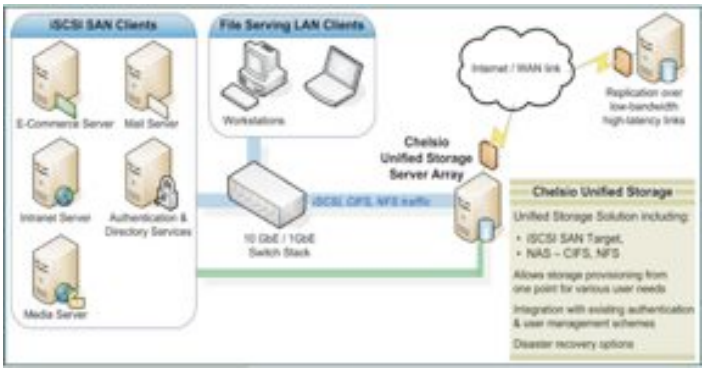
Flexible branding capability feature for OEMs

Software Implementation

- Chelsio iSCSI Target Protocol Stack using Chelsio 10Gb or 1Gb Ethernet adapters, capable of up to 2 M IOPS and 3GB/s full-duplex throughput on a single Chelsio card
- Simultaneous offload of iSCSI and NAS traffic on Chelsio 10Gb Ethernet adapters
- USS supports Fibre Channel in target and initiator modes.
- Support for low-latency, high-workload random transactions, ideal for databases, mail servers, and file servers.
- Storage management – Includes dynamic storage allocation, redundancy, and snapshots for convenient and quick backup and restoration of data.
- iSCSI Scaling enables Petabyes of storage capacity with multiple iSCSI arrays.
- High Availability (HA) clustering including dual-head support, remote mirroring and live migration.
- Two-tier cache using RAM and PCIe SSD. Support for HA cache coherency.
- Live migration allows a server administrator to move a running virtual machine or application between different physical machines, or swap-out hard disks, without disconnecting the client or application.
- Hardware RAID controllers from LSI and Adaptec, for redundancy and performance.
- Nested RAID provides higher level of redundancy than regular storage arrays.
- Support for common file-sharing protocols – CIFS, NFS, and FTP.
- Addresses the storage consolidation requirements of block storage and file serving, i.e. SAN and NAS.
- Replication – Unified Storage Server allows you to increase data availability and provide disaster recovery for your network storage by creating a copy of data on a remote peer over local area networks (LANs) or wide area networks (WANs) with high-latency, low-bandwidth links.
- NAS features for different needs, NFS for UNIX, Linux networks, CIFS for Windows, and FTP for legacy applications.
- Authentication support using NIS for UNIX clients, and Active Directory for Windows clients.
- Online update of system OS image – update takes effect after reboot.
- Greater than 2TB disk size support for streaming data, delivering breakthrough performance for video/multimedia applications.
- Capable of serving shared storage for Microsoft Windows 2003/2008 Cluster nodes.
- Enables "Secure iSCSI™ " to protect all storage data with a 32-bit CRC. The dual iSCSI/Ethernet CRC provides more data protection than Fibre Channel.

Ordering Information

USS 3.0 - BNDL-M : All Features - Maximum Capacity 48 TB
USS 3.0 - BNDL-L : All Features - Maximum Capacity 96TB
USS 3.0 - BNDL-XL :All Features - Unlimited Capacity
MAINT1 - Annual Software Maintenance



Specifications

NAS Features

- CIFS
- NFS
- FTP

iSCSI Features

- MPIO
- ACLs
- iSNS
- CHAP authentication
- High-performance target stack with 1.1M IOPs and 3GB/s throughput on a single Chelsio card (more with more cards)
  T4 ASIC-based 10GbE HBAs
- Greater than 2TB LUN support
- Support for Microsoft Cluster Nodes with iSCSI shared storage
- iSCSI boot initiator DHCP management
- iSCSI boot LUN cloning
- iSCSI Scaling up toPetabytes

Fibre Channel Features

- Support for both target and initiator modes
  - Emulex Controller - Target and Initiator modes supported
  - Qlogic Controller - Initiator mode only

Storage Management

- Performance monitoring
- Asynchronous replication
- Snapshots of iSCSI LUNs/Shared file systems
- Backup and restore to disk and tape drives
- Thin provisioning and Volume cloning
- Software RAID and Hardware RAID
- Hardware management
  - RAID controller management support
  - Fibre Channel initiator HBA management support
  - SSD storage support

Redundancy/HA Features

- Clustering
- Remote Mirroring
- Nested RAID
- Live Migration

Additional Features

- Chelsio TCP/IP offload + iSCSI offload
- NFSoRDMA for low latency NAS
- Lustre for HPC storage

System Requirements

- AMD64/EM64T 64-bit processor
- 8 GB RAM
- HDD (SSD, SAS, SATA, SCSI)
- Chelsio Adapter

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