EtherDrive® SR420

Storage Appliance 1U 4Disk

The Linux Storage People

Summary

- The 1U EtherDrive® SR420 Storage appliance bridges 4 disks to an Ethernet network as individual disks or as one or more RAID sets

- Internal RAID controller allows disks to be assembled into RAID sets including RAID 0,1,5,10 and concatenated/linear combinations

- EtherDrive® Storage provides unlimited block storage, enabling simple Storage Area Networks using Ethernet

- Logical disks can be shared by multiple servers

- Storage access > 60K IOPS, and > 110 MB/sec

- Disks can be assembled into RAID sets including RAID 0,1,5,10 and concatenated/linear combinations.

- Simple command line interface

- Syslog status messages

- MAC filtering restricts disk access to authorized servers only

- EtherDrive® Storage uses the AoE protocol now included as part of every Linux kernel

- AoE drivers are available for Linux, FreeBSD, Solaris and other Operating Systems.

- Dual Gigabit Ethernet connections

- Up to 750 GB per SATA1 or SATA2 disk

- Up to 3 TB per 1U shelf

A New Type of Networked Storage

Coraid is proud to introduce the EtherDrive® SR420 Storage appliance, a new way to implement true networked storage. EtherDrive® Storage is Direct Network Attachment (DNA) block storage. DNA moves a disk drive onto a network connection. Servers connect to DNA Storage via ordinary Ethernet connections. DNA uses the open ATA-over-Ethernet (AoE) protocol. AoE is simpler than the iSCSI protocol and does not require TCP/IP processing or expensive network adapters.

EtherDrive® Storage is directly accessible and shared by Servers on the network. Disks inside the EtherDrive® Storage appliance can be assembled into RAID sets and presented as logical EtherDrive® devices. Servers can mount these block devices and use them just as if they were local disk drives. Storage can be freed and re-attached to a new server without having to move disks or cables.

Unlimited Storage

Users can install their own SATA disk drives. The SR420 accepts any standard SATA1 or SATA2 disks. As disk higher density disks become available new SATA disks can be installed quickly and easily.

There are no limits to how many disks can be attached to a single Server. There are no constraints to how big an EtherDrive® Storage array can be expanded. Since each EtherDrive® Storage appliance has its own GigE connections, the storage array performance increases directly proportional to the number of appliances in the array. Each time a new EtherDrive® Storage appliance is added to the storage system, more processing power is added and therefore throughput and IOPS performance of the storage system is also increased.

4 Slot Shelf

Each SR420 Storage appliance connects up to 4 SATA disks configured into one or more RAID sets then connects them to a GigE connection. EtherDrive® Storage appears as a local disk drive to its host.

Simple to Understand, Simple to Manage

The simplicity of EtherDrive® Storage makes it easy to manage, because it's easy to understand. EtherDrive® Storage is a disk connected to your server via Ethernet. No need to learn complicated technology like Fibre Channel. Just add SATA disks to the EtherDrive® Storage appliance and you have all space you want on any server on the network. It's that simple.

Low Cost Networked Storage

EtherDrive® Storage is less expensive than any other networked storage. The storage costs for traditional Storage Area Networks (SANs) are very high. Fibre Channel switches and Host Bus Adapter (HBA) interfaces are expensive, take up a lot of space, and require costly system administration. EtherDrive® Storage eliminates all that by being a very simple and affordable Ethernet based Direct Network Attachment.

Easy to Install, Easy to Grow

A simple command line interface allows you to create disk RAID sets.   JBOD and RAID levels 0, 1, 5, 10 can be used. You can also expand a RAID set by concatenating RAID sets. You can assign hot spare disks that will automatically backup a failed disk. UDP status messages are used to update the host's syslog.

Performance You Want

Since EtherDrive® Storage is a Direct Network Attachment (DNA), you can have any performance you wish just by adding the Ethernet that matches your requirements. Storage access speed is over 60K IOPS and > 110MBytes/sec. Standard Linux RAID and LVM software can stripe multiple drives into a single high speed volume.   Access to this volume can span multiple EtherDrive® Storage appliances themselves consisting of RAID sets, providing an aggregate bandwidth limited only by the host system configuration. The EtherDrive® Storage architecture gives unprecedented configuration flexibility.

Small on the Outside, Large on the Inside

A single 1U EtherDrive® Storage shelf holds up to 4 SATA disks for a capacity of 3TB of data when using 750GB drives, making it one of the most dense disk arrays currently available.
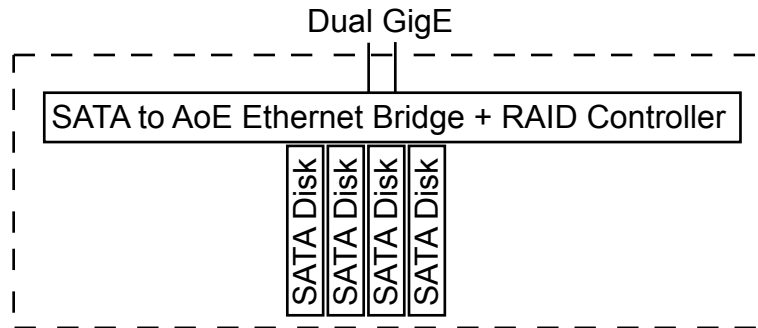
EtherDrive® Storage Security

MAC address filtering allows the storage appliance to restrict access to disks based upon host MAC addresses. With MAC address filtering, only hosts with allowed MAC addresses can access specified logical devices within the SR420 Storage appliance.

Dual GigE

| SATA to AoE Ethernet Bridge + RAID Controller |
| SATA Disk | SATA Disk | SATA Disk | SATA Disk |

Specifications

3.5" SATA Disk Capacity	any size, up to 750 GB SATA1 or SATA2 drive, hot swap
Control Interface	RS-232, KVM or EtherConsole, command line interface
Network Interface	Dual 1 Gigabit/sec Ethernet, RJ-45
Number of simultaneous hosts accessing storage	No limit
Storage Access Speed	> 60,000 IOPS, >110MBytes/sec with 8K jumbo frames
RAID Types Supported	RAID 0 (striping)
	RAID 1 (mirroring)
	RAID 5 (striping with parity)
	RAID10 (striping with mirror)
	Concatenated RAID sets & linear
Storage Security (optional)	MAC address filtering, only allowed MAC addresses can access specified logical blades (VLAN support, future)
Power Supply	100-240 VAC, 50/60Hz
Cooling	3 cold swap fans
Power Consumption with disk drive	< 250 Watts
Shelf Dimensions	17.2 x 1.7 x 19.8 inches, 31 lbs
SATA Disk Drives per Shelf	4
Shelf Capacity	Up to 3 TeraBytes
Expansion	up to 65,536 shelves per network (262,144 disks)
Operating Temp	50-95 degrees F (10-35 degrees C)
Relative Humidity	20%to 90%(non-condensing)
Warranty	36 Month
Operating System	AoE is in the Linux 2.6.11+ kernel, drivers for earlier Linux kernels are available from Coraid, Drivers are also available for FreeBSD, Solaris Apple OS X and Windows.

For information on EtherDrive® Storage Blades, call 706- 548-7200, email info@coraid.com or visit our web site www.coraid.com