



Scale-Out SAN for High Performance Computing

Redefining HPC Storage

The unique and growing challenges of High Performance Computing (HPC) and High Performance Virtual Computing (HPVC) environments are a natural fit for Coraid's scale-out architecture.

Coraid's unique storage appliance is redefining storage economics with a new generation of Ethernet SAN technology that provides HPC environments of all sizes with a flexible tier of high performance storage built on commodity hardware.

Research organizations including, Los Alamos National Laboratory, NASA, NOAA, USGS, Washington University, and 120 other universities and government agencies worldwide have employed EtherDrive Ethernet SAN storage in large-scale supercomputing projects including human genome research, energy research, and government security applications.

Simplify Administration

No more complex SAN topologies, no more forklift upgrades, and no more esoteric Fibre Channel issues. Coraid's CorOS™ provides the ultimate in simplicity - arrays can be deployed in minutes with as few as three configuration commands. Ethernet SAN drivers developed by Coraid have been included in most Linux distributions for years, and high-performance Coraid HBAs can easily be installed in existing servers. By utilizing ubiquitous Ethernet, Coraid solutions vastly simplify the deployment and scaling of storage systems making it possible to manage Terabytes to Petabytes without a dedicated SAN administrator.

Human Genome Research

Human genome research projects need to process complex DNA sequencer images that are captured and fed into a high performance Linux computer cluster over a standard 10 Gb Ethernet connection. Projects like this require very fast shared storage that can keep up with the exacting performance needs of the cluster, scale to meet growing storage demands and support 10 Gigabit Ethernet connections running between the SAN storage and the HPC cluster.

Highlights

Achieve Faster Results

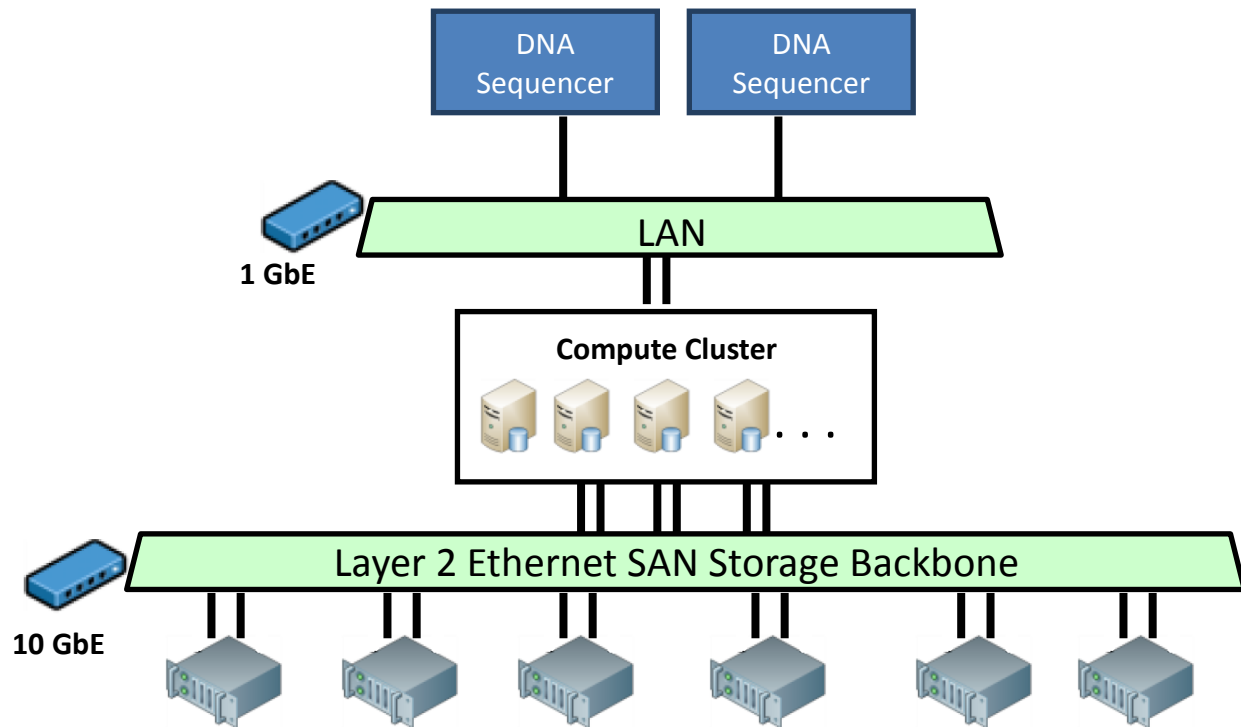
- Massive throughput up to 1800 MB/sec per shelf
- Scale out architecture means capacity and performance scale linearly with each additional storage appliance
- Automatically load balance multiple network connections for aggregated throughput and redundancy

Simplify IT Administration

- Manage and provision storage without the need of a SAN administrator

Reduce Cost

- 5-8x Price/Performance advantage over Fibre Channel



Six EtherDrive SRX Storage Arrays, 400 TB RAID 6 protected

The diagram above, illustrates just such a storage infrastructure running across Coraid EtherDrive storage appliances. With the help of EtherDrive performance advantages, 30% faster than Fibre Channel, and scale-out design, researchers are able to analyze data faster and store far more data. The system's scalability and adaptability ensures the storage can scale to satisfy research demands for more cost effective storage and I/O performance with minimal management burdens.

It also gives tremendous amount of flexibility in how to configure the storage -- something that is critical in the fast-changing world of next-generation sequencing. Coraid EtherDrive provides a tremendously better price to performance value, 5-8X that of other storage platforms. With genomic research driving up data demand exponentially, EtherDrive is an affordable (starting at \$600 per terabyte), reliable way to boost research speeds.

Finally, EtherDrive is also simple to administer, and its open standards-based architecture allows users to incrementally scale storage minimizing up-front costs, system overhead and maintenance.

Contact Coraid for your HPC Storage Needs

Coraid delivers high performance, rapidly scalable Ethernet SAN infrastructure in support of High Performance Computing (HPC) infrastructure requirements. Contact your Coraid representative to learn more about Coraid scale-out SAN solutions.