LumaForge delivers fast, efficient, cost-effective shared storage solution using CSPi Myricom Products

OVERVIEW

- **Industry**
  Media & Entertainment

- **Challenge**
  Cost-effective, high throughput digital content acquisition and storage

- **Solution**
  Combining the leading edge Myricom® 10GBASE-T networking technology with the powerful functionality of the ZFS file system, LumaForge developed a Network Attached Storage (NAS) platform that delivers the best price/performance in the industry.

LumaForge is a Value Added Reseller and Solution Provider focusing on the Media and Entertainment (M&E) industry.

Challenge

Neil Smith, CTO of LumaForge explains, "We are witnessing a revolution in the M&E industry with the rapid adoption of digital acquisition and file-based workflows. As Hollywood embraces the digital revolution, the biggest challenge facing Studios, Productions and Post-production facilities is where to store all the data being generated and how to move that data around facilities and between facilities in the most cost-effective and secure manner."

Solution

Combining the leading edge Myricom 10GBASE-T networking technology with the powerful functionality of the open source ZFS file system, LumaForge has developed a Network Attached Storage (NAS) platform that delivers the best price/performance in the industry.

Myricom 10GBASE-T network adapters are designed for applications requiring low cost 10-Gigabit connectivity with fast, wire speed performance. The adapters are supplied with drivers and software that achieve optimum performance in the M&E markets. The Myri10GE drivers for the content creation and post-production markets allow facilities to integrate Mac, Windows and Linux clients easily and cost-effectively into their back-end file servers. The Myricom 10GBASE-T adapters with the Myri10GE software perfectly match the critical requirements for high throughput video editing and finishing by delivering the best in class throughput performance not only for OS-X, but also Windows and Linux.

The LumaNAS 3.0 shared-storage platform incorporates dual port 10G-PCIE2-8C2-2T Network Interface Cards (NICs) in the ZFS file-server with single port 10G-PCIE2-8C-T NICs in the Clients. The 10GBASE-T network can either be run through an inexpensive switch or through direct point-to-point connections. Either topology works incredibly well and means that facilities can start small, with three or four client machines directly attached to the LumaNAS 3.0 file server, and scale quickly and cost-effectively to twenty to forty clients attached through a managed L2 10GBASE-T switch (see Figure 1).
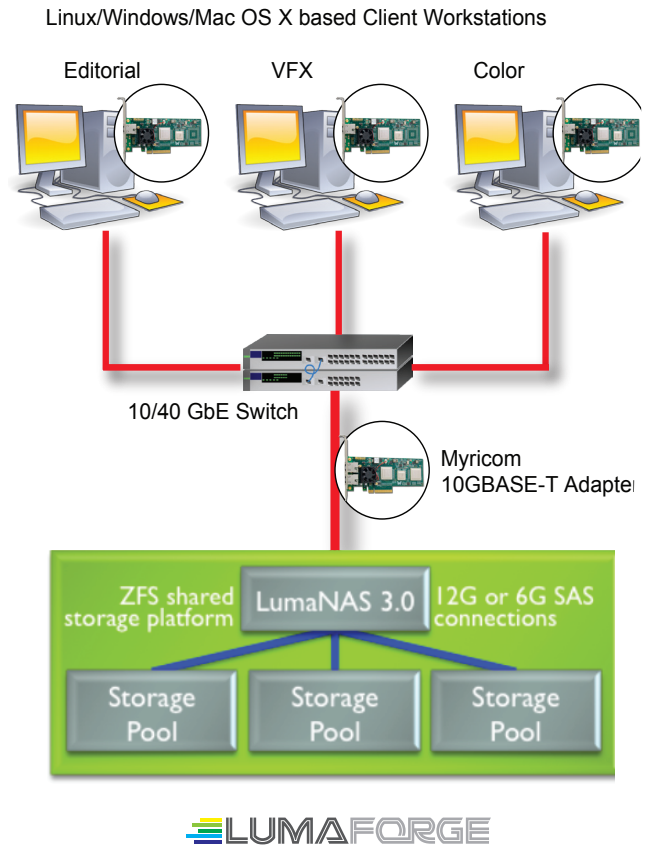
MYRICOM
Products by **CSPi**

Results

The LumaNAS 3.0 shared storage solution combined with Myricom 10GBASE-T networking is ideally suited for editing, VFX and finishing workflows for high resolution formats including HD, 2K and 4K. For collaborative workflow involving teams of artists using applications like Blackmagic Design's DaVinci Resolve, Adobe's Creative Cloud and the Foundry's NUKE Studio, the LumaForge NAS 3.0 platform combined with the Myricom 10GBASE-T network offers a high speed file access with high data integrity.

For intra-facility data storage and networking, the combination of the LumaNAS 3.0 shared storage platform with the Myricom family of NICs means that facilities have access to the robust and secure ZFS file-system delivering 800 MB/s of sustained throughput to desktop clients over standard Cat 6a or 7 Ethernet cabling.

Using the Myricom NICs, LumaForge is able to offer a Client/Server solution that provides fast and sustained data flows from the ZFS NAS storage to the client desktops. This capability goes beyond simple file-transfers to the delivery of streaming video content at 24, 30 and even 60 frames per second. Previously, LumaForge was able to only do this over expensive 8Gb/s Fiber Channel SANS. With the explosive growth in digital content they needed a more efficient and cost-effective approach.

The 10GBASE-T LumaNAS 3.0 solution leveraging the price/performance benefits of CSPI's Myricom leading edge network technology offer the advantages they had been looking for at a price their customers can afford.

Linux/Windows/Mac OS X based Client Workstations

Editorial   VFX   Color

10/40 GbE Switch

Myricom
10GBASE-T Adapter

ZFS shared storage platform   LumaNAS 3.0   12G or 6G SAS connections

Storage Pool   Storage Pool   Storage Pool

LUMAFORGE

LumaNAS shared storage solutions with Myricom 10GBASE-T networking for editing, VFX and finishing workflows for high resolution formats.

CSPi
High Performance Products