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CUSTOMER CASE STUDY

XENON Systems Selects Adaptec for Post-production Film Application

Adaptec Unified Serial™ Series 5 Exceeds Performance Requirements

Introduction

XENON Systems of Melbourne, Australia provides high-performance server and storage solutions to customers including film and post-production studios, TV stations, government organizations, and high-tech companies. Their storage offerings range from general-purpose business networked attached NAS systems to storage area networks (SANs) to direct attached storage (DAS) with both internal and external connectivity.

Tackling a Performance Challenge

One of the key challenges facing XENON, and all solution providers who serve the film and post-production industry is finding a way to provide high performance in a format that allows everyone to access the data as they need it, without a long transfer process between film-making functions.

In producing a movie, the footage undergoes many different processes in the production pipeline, from film edition to adding special effects and color correction. Moving and manipulating these extremely large files, typically around 5TB in size requires expensive storage systems. Once each step is done, the data is transferred to the next step in the process, but copying over files using Samba or NFS, can take many hours.

"On the post-production side, maximum throughput wins," said Dragan Dimitrovici, Managing Director, XENON Systems. "A SAN is fast but only one server can attach to a logical volume at a time. With NAS, everyone can attach to the same data, but performance is an issue."

The Adaptec Series 5 RAID Controller Delivers the Required Performance in a PCIe Card

To solve this problem, XENON's subsidiary XDT have developed slingshot™, a high-performance, networked, file data replication and streaming solution that combines the performance of a SAN with the centralized storage and access of NAS. In a quest to find the performance this solution requires, they tested the Adaptec RAID Series 5 family

Executive Summary

Challenge

XENON Systems is seeking a controller to integrate into a solution that combines SAN performance with NAS accessibility for clients in the film and post-production industry.

Solution

Adaptec Series 5 RAID Controller

Results

In testing the Adaptec Series 5, XENON found:

- Performance equal to or better than Fibre Channel-to-Fibre Channel and Fibre Channel-to-SAN external controllers with dedicated I/O processors
- Performance that was equally good on small files and large files
- The ability to handle Film 2K data streams at a sustained 320GB/s and Film 4K data streams at a sustained 1.2GB/s

"We believe the Adaptec Series 5 RAID controller will deliver the performance you would expect out of an enterprise storage system in a PCIe adapter."

Dragan Dimitrovici
Managing Director, XENON Systems

XENON Systems Selects Adaptec Series 5 RAID Controllers

of controllers. The Adaptec RAID Series 5 family was designed to deliver a new level of performance with the latest PCIe connectivity, an industry-leading dual-core RAID on Chip (ROC) and a 512MB cache. Testing has gone well. "The processor is really screaming hot. The Adaptec Series 5 is on par, or better than, Fibre Channel-to-Fibre Channel and Fibre Channel-to-SAS external controllers that have dedicated I/O processors." In terms of performance for its film industry customers, the key performance indicator is the ability to read and write multiple Film 2K data streams at a sustained rate of 320GB/s and Film 4K data streams at a sustained rate of 1.2GB/s. "A Tier 1 enterprise storage solution that can deliver this performance costs a couple of hundred thousand dollars. We believe the Adaptec Series 5 RAID controller will deliver the performance you would expect out of an enterprise storage system in a PCIe adapter. It will reduce the solution cost to $30,000." Another performance feature that impressed him was the ability to perform well on files of all sizes. "Typically, you can get good performance copying large files, but the performance drops as the file gets smaller. The Adaptec Series 5 delivers similar performance on small files as well as large files, from 200K to 12MB." Dimitrovici also likes the high port capacity available in the Adaptec RAID Series 5 family of controllers. He talks of combining the 24-port Adaptec RAID 52445 with 1TB disks to provide 24TB of capacity in just 4U of space. "We feel that the Series 5 is going to be an awesome product. And, Adaptec has the best support compared to other people. It's not just who's fastest, it's what happens when things go wrong and who will be there to support you."

Ten Years of Integrating Adaptec into Storage Solutions

XENON has been using Adaptec controllers for the past ten years. Currently, Adaptec Unified Serial RAID controllers are primarily being integrated into the company's NAS & DAS storage solutions. These systems are tailored to a customer's need, including Serial ATA (SATA) disks when maximum capacity is desired and a mix of Serial Attached SCSI (SAS) and SATA disks when capacity needs to be combined with some amount of higher performance storage for applications such as large databases.

The company relies on Adaptec Storage Manager™ management software for managing storage built on Adaptec RAID controllers as well as for managing onboard SATA HostRAID that integrates Adaptec RAID code.

According to Dimitrovici, a solution might integrate 8 to 16 disks running storage off the Adaptec RAID controller as well as providing mirrored data protection using the onboard Adaptec HostRAID. "The Adaptec Storage Manager lets you look at both with one application. It's quite nice."

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