Motek uses NexentaStor for improved iSCSI data integrity and performance

Motek Entertainment (www.motekentertainment.com) is a high-end animation, motion capture and production studio specializing in services and production work for features, commercials, television, video games, online and mobile media headquartered in Amsterdam, the Netherlands. Before NexentaStor Motek felt caught in the middle, neither able to justify the expensive closed solutions of leading NAS and SAN providers or comfortable trusting their business to inexpensive iSCSI with SATA drives.

Customer Challenges

Graphics production, including motion capture and simulation, creates gigantic amounts of data, often in very large file sizes. This leads to several complexities such as:

- With large files and large inexpensive disks the chances of corruption impacting one of Motek's files has increased dramatically in recent years.

- Leading NAS solutions have hard limits on file size that are smaller than the large files Motek often creates.

- iSCSI is a fast growing market segment that is offers much less expensive storage capacity than proprietary NAS and SAN solutions. However iSCSI lacks the full breadth of storage management capabilities of leading NAS solutions. No iSCSI solution can offer the unlimited, no-CPU impact snap shots available from NexentaStor Enterprise Edition for example.

- Motek's engineers are much better utilized doing core engineering as opposed to storage provisioning and administration; and yet most storage solutions require the expensive and labor intensive pre provisioning of storage capacity.

Motek has a 14+ year history of making informed technology decisions that help them to stay on the cutting edge of their fast moving markets while focusing on what matters most: the creation of world class creative content. Recent growth in their business and storage demands left them facing these complexities, concerned about the possibility of rapidly rising storage and management costs and the risks of data corruption.
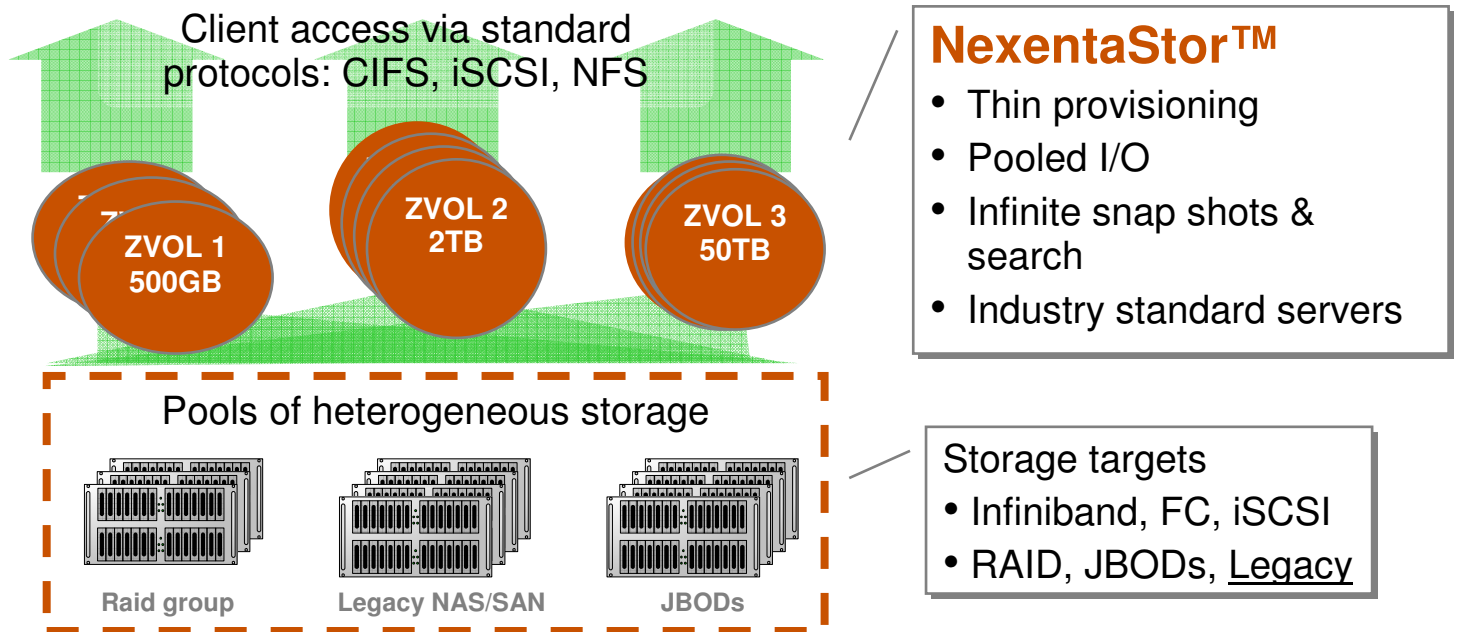
Results:

- The 128 bit ZFS file system helped Nexenta provide Motek with *storage without limits:* no practical limits on file size, or the number of files or file systems, including incremental snapshots. For Motek this means the large files of completed simulations no longer cause management headaches.

- Multi-level data protection for maximum data integrity and longevity. The next generation check-sum capabilities of NexentaStor and ZFS eliminate silent data corruption, making iSCSI solutions with large SATA drives safe to use even for Motek's critical data.

- Inherent virtualization improves performance via **IO pooling** and reduces costs and management effort via native **thin provisioning**

- The power and breadth of capabilities of an enterprise class NAS plus the cost savings of iSCSI. **Estimated savings of 80% vs. comparable legacy NAS solution.**

"Cliches like 'have your cake and eat it too' come to mind when describing our use of NexentaStor in front of free open source iSCSI targets. We are getting the management simplicity, data integrity, and performance in support of our massive graphics files that you might expect from an industry leading NAS plus the cost savings of iSCSI. "

Nathan Ornick
Studio Manager, Motek Entertainment

What is the Solution?

NexentaStor Enterprise Edition provides the industry's first enterprise class NAS and iSCSI management solution based upon the growing Open Solaris Open Storage community. The underlying technologies, ZFS and OpenSolaris, provide the basis for very high scalability required for growing enterprises that do not want to worry about the costs and pains involved in adding storage or storage systems to their data centers. The particular features of the ZFS powered NexentaStor that solved Motek's problems include end to end check-sums, IO pooling to improve performance and native thin provisioning to limit time spent provisioning and reconfiguring file systems.

Open source-based technology ensures that the solution is not proprietary with vendor dependencies which hinder easy and low-cost usability over lengthy periods of time. It also obviates the unnecessary vendor mark-ups for standard features. Further, ZFS offers massively scalable storage environments with virtually unlimited number of snapshots thus providing free versioning and high granularity of data protection.

NexentaStor performs particularly well behind applications that create large amounts of unstructured data.   In such a configuration NexentaStor shares content to the application or applications and also typically acts as a fully featured 2nd tier NAS solution, providing a full suite of backup and replication services including limitless snapshots and Boolean search and retrieval; in more advanced cases the powerful and easy to use NexentaStor API can be used to enable applications to leverage the entire set of capabilities of NexentaStor including creating, managing, and replacing storage pools. In many cases a multi-level architecture such as that employed by Motek is used so that inexpensive iSCSI targets are exposed to NexentaStor which, in turn, exposes the virtualized and managed storage to the data intensive applications via NFS or other protocols.

Client access via standard protocols: CIFS, iSCSI, NFS

ZVOL 1 500GB

ZVOL 2 2TB

ZVOL 3 50TB

NexentaStor™
- Thin provisioning
- Pooled I/O
- Infinite snap shots & search
- Industry standard servers

Pools of heterogeneous storage

Raid group

Legacy NAS/SAN

JBODs

Storage targets
- Infiniband, FC, iSCSI
- RAID, JBODs, Legacy

NexentaStor abstracts the underlying storage, creating ZVOLs that are exposed to clients via standard protocols. These ZVOLs can be managed via infinite snap shots and block level replication with the assistance of integrated search. No special client software is required. The result is a breakthrough is ease of use, price / performance, and price / capacity.

About Nexenta

Founded in 2005 and privately held, Nexenta Systems, Inc., has developed NexentaStor™, the leading OpenStorage enterprise class storage solution and sponsors NexentaCore, an operating system that combines the high performance and reliability of OpenSolaris with the ease of use and breadth of applications of Linux. Both solutions leverage the revolutionary file system, ZFS. More information about Nexenta Systems, Inc., and about Certified partners that provide hardware, software and service solutions based on NexentaStor can be found at www.nexenta.com.