SGI and PipelineFX: Render Management Solution
Render Farm and NAS Bundle for Rich Media Applications

- Complete fixed bid jobs faster and with greater quality
- Run concurrent jobs securely in the facility
- Bring in high-margin last minute rush jobs and know you have the resources to successfully complete the project

Tremendous opportunities in rich media applications also bring daunting challenges. Creative and technical users are facing custom geometries and larger data sets to add higher levels of realism to digital simulations and video games. While opening exciting possibilities, this approach also escalates the amount of data per frame to be rendered. Build times can be in excess of 60 CPU-hours, a huge increase.

At the same time these professionals are equally concerned about maintaining the quality on which they've built their reputations. The more iterations an artist can execute in a given timeframe, the better the end product will be. However, climbing build times can compromise the product's quality.

This scenario represents a challenge in delivering the highest quality product on deadline, and making the best use of an entire staff and technology resources.

Customers with similar challenges are turning to SGI and PipelineFX.

SGI® Altix® XE servers with Qube!™ software by PipelineFX™ create a rendering solution to readily address these challenges. Together SGI and PipelineFX enable creative and technical customers to achieve greater efficiencies in managing the project workflow for special effects, game development as well as engineering and scientific analysis which results in higher productivity, shorter production timelines and higher-quality content.
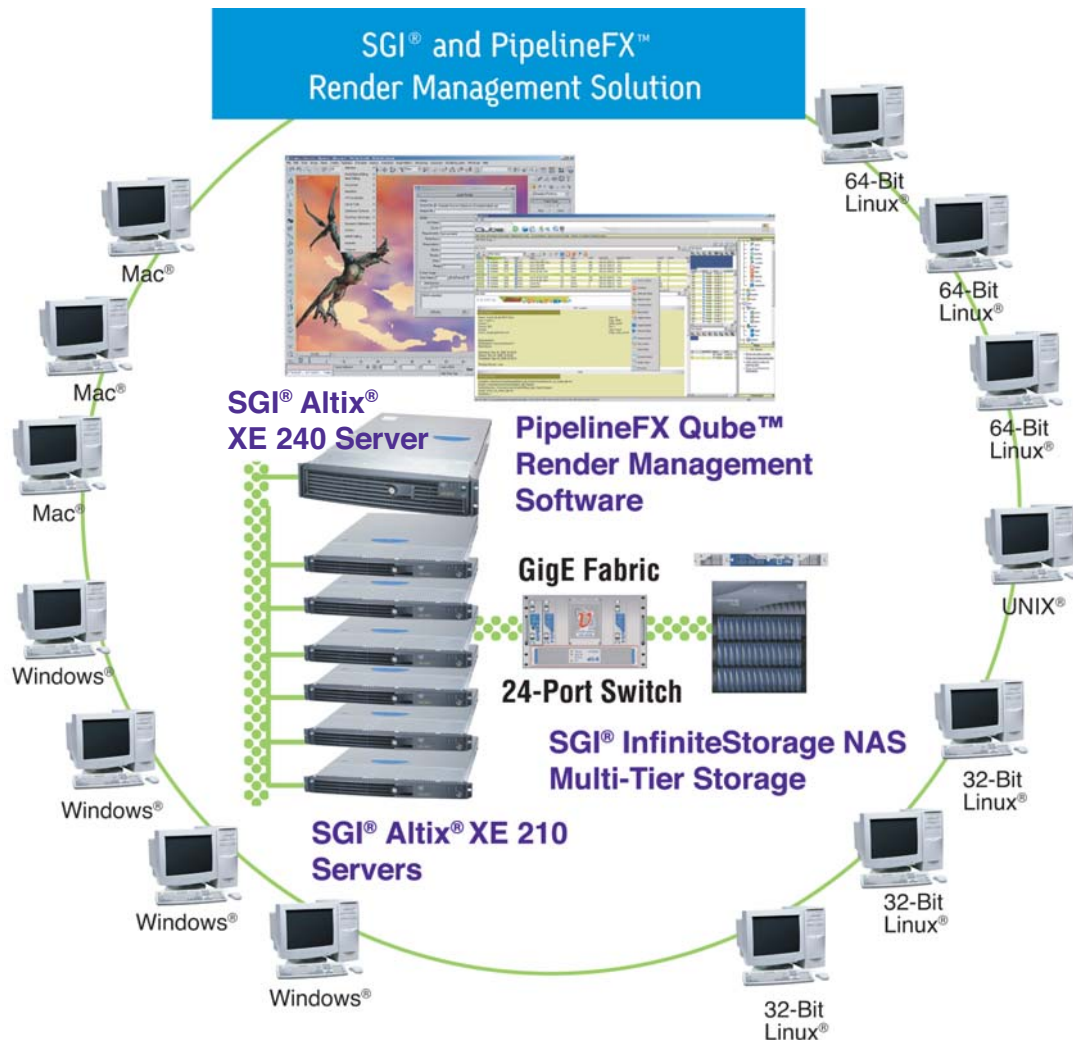
Better render management is achieved due to the integration of SGI and PipelineFX products and the companies' shared approach of addressing the customer requirements from an open, scalable, platform agnostic, data management philosophy.

This powerful and scalable solution, ideal for managing the rendering of large and complex 64-bit data models, incorporates the 64-bit Linux® OS-based SGI's Altix XE server and the PipelineFX Qube! render management software.

Qube! integrates directly with most leading 3D modeling and rendering applications, providing render management across multiple applications and operating systems. SGI's heterogeneous file system approach to data management is achieved through the SGI InfiniteStorage NAS storage,

networking and management software coupled with the Qube! render manager on the SGI Altix XE server making it easy to operate and maximize utilization of software, servers and storage in a coherent holistic manner.

SGI uniquely offers the ability to readily grow this rendering solution in server capacity, storage capacity, NAS-to-SAN conversion, and additional licenses of Qube! as your business requires. Qube! has proven many times over that it is the right choice for studios that depend on software innovation to keep pace with the growing size and complexities of data models and demanding schedules of today's productions. And with the leasing options available, customers can start small, add and refresh equipment as required, and have better management of their costs, growth and ultimately profitability.

SGI® and PipelineFX™
Render Management Solution

64-Bit Linux®

64-Bit Linux®

64-Bit Linux®

Mac®

Mac®

Mac®

SGI® Altix®
XE 240 Server

PipelineFX Qube™
Render Management
Software

GigE Fabric

UNIX®

24-Port Switch

SGI® InfiniteStorage NAS
Multi-Tier Storage

Windows®

Windows®

32-Bit Linux®

SGI® Altix® XE 210
Servers

32-Bit Linux®

Windows®

Windows®

32-Bit Linux®

Fast, Low Cost and Easy to Deploy

The SGI and PipelineFX Render Management Solution delivers precisely what customers need in server clusters and storage solutions that fit their budgets and fulfill their deployment strategies. IT managers in small or large production companies or development facilities can quickly implement a rendering solution that is expedient, costs little to operate and is far easier to purchase, install, manage and service, than sourcing computer clusters, storage, and networking components independently.

IT managers in digital media production, architecture, design, fluid dynamics, bioinformatics, and circuit design should consider this solution for your organization if:

• You are managing large amounts of rich media content and spending an inordinate amount of time decimating your data so that you can work with it and share it
• You spend a lot of time moving data around the network among compute and storage resources
• You can not work with your entire data model intact and would benefit from this capability

PipelineFX's Qube!

Qube! is an ideal render farm management system for the film and video game industries – for both rendering and build processing alike. Qube! has demonstrated time and again that it can improve productivity and increase content quality while optimizing hardware resources

• Combines state-of-the-art techniques for batch queuing, distributed processing and render farm management
• Maximizes job throughput and accelerates the millions of computational tasks that occur during the graphics rendering and software build processes

SGI Altix XE Servers

SGI's Altix XE servers based on Dual-Core Intel® Xeon® Processor are custom-integrated at the factory and are backed by SGI and its decades-long track record of successful customer deployments.

The new servers are available in two form factors: SGI Altix XE 210 in a 1U chassis ideal for dense cluster configurations, and SGI Altix XE 240 is an I/O-rich, 2U chassis that is a prime option to serve as a cluster head node. The SGI and PipelineFX Render Management Solution base configuration includes one "supervisor" server based on the Altix XE 240 server and six "worker" servers on the Altix XE 210 servers.

Standard SGI Altix XE servers:
• Are driven by Dual-Core Intel Xeon Processors
• Pack a total of four processor cores and supports up to 32GB of memory in each server
• Feature a leading energy-efficient design to address power management and cooling concerns
• Feature a Modular Systems Management design to help meet RAS (Reliability, Availability and Scalability) requirements

Render Management Solution Offers:
• Rapid deployment – Pre-configured and certified
• On-Site installation
• Technical support on hardware/software and Linux OS and PipelineFX's Qube!
• Single source for hardware support for entire render farm (servers and storage)
• Minimum footprint (one rack for the whole farm)

SGI® InfiniteStorage NAS Solutions

SGI InfiniteStorage NAS solutions provide optimal high-performance network-attached storage (NAS) services for data-intensive rich media environments.

The SGI® InfiniteStorage NAS offers:
• Universal data access for heterogeneous environments without sacrificing performance
• Multiple configurations that easily connect to existing network infrastructure to serve UNIX®, Windows®, Linux® and Apple® clients
• A rich feature set including;
  • Industry-leading price/performance, high reliability and availability
  • Easy to use NAS manager software
  • Seamless transition to heterogeneous SAN
  • Capacity upgrades though additional storage and Gigabit Ethernet infrastructure

Pay As You Grow

You can scale the render management solution in many different dimensions by adding the following options:

- Dual-Core Intel Xeon Processors – up to 288 in a standard cluster offering, no limit to scalability
- Memory – Up to 32GB per server/node
- SGI® Altix® servers for extreme shared-memory dataset rendering
- Up to 16TB of storage to NAS
- Additional Ethernet switch ports for clients
- Migrate NAS-to-SAN Infrastructure

All options and upgrades to the box configurations are available as part of lease plan refresh or purchase.

One Call for Service

Service and support are key components of SGI's cost-effectiveness, designed to optimize the return on your technology investment. SGI offers a single point of contact for tested and supported solutions.

Better ROI and Total Cost of Ownership Models

Fast and easy are only part of the equation. IT managers not only need a near-term solution to heighten productivity, they need a long-term solution to ensure they will not encounter other obstacles from hidden costs, administration overhead or scalability limitations. The SGI render management solution with Qube! offers a solution that will allow them to focus on content creation rather than system management. The SGI and PipelineFX solution drives faster ROI by offering users:

- **Fast, affordable deployment.** x86 64-bit systems are available with a complete, factory-integrated solution stack to simplify deployment and reduce installation costs
- **Uniquely flexible.** Customers can maximize their raw performance and I/O bandwidth by selecting Altix XE or adding an Altix 450 server with scalable memory for large data model rendering
- **Pay as you grow–system upgrades.** Users buy or lease only what they need today and grow configurations as business requirements increase

3941 [04.30.2007]   **J15169**