

Media Entertainment Case Study

Highlights

Media Entertainment

Challenges

- High Concurrency
- Large Capacity Storage
- High Availability
- Flexible to upgrade

Scala Storage Solutions

- Dynamic increase capacity and performance
- No single point of failure
- Aggregated bandwidth for High Definition Editing
- High IO/s and file lookup per second for rendering farms.

Best TCO

- Pay as you grow
- Single management interface
- Predictable scale up capacity and performance.

Post Production Firm Lower their TCO using Scala Storage Scale Out Solution for SFX, 2D and 3D Editing Station and Rendering Farms Cluster

Background

The war on containing the explosive growth of big data is a common concern for many large enterprise organizations with the media entertainment industry at the forefront. With over 100 movie releases, over 300 television shows, and over 100 television movies going up to 4K resolution, it's no doubt why one of the world's largest digital film post production house was in dire need of a data storage solution to fit their capacity and performance needs. One of the major challenges for their production facility is the flexibility of their storage infrastructures. With over four hundred editing stations on different platforms and over a hundred Linux rendering clusters, a traditional storage system could not sufficiently satisfy their dynamic storage growth for their high definition raw videos for both files size and performance. Not only is their storage utilization for different storage platforms very high, but also the time and effort to manage it while maintaining them at the highest level of availability without any downtime was close to impossible or at least labor intensive and costly. Older storage technology, such DAS, NAS and SAN, are no longer able to fit their requirements for the latest special effects, 2D, and 3D environments.

In came Scala Storage Scale Out solution to provide them with over 500 terabytes in the form of multiple shared storage pools specifically for the video editing groups, rendering cluster for special effects, and 2D/3D rendering. Scala Storage Scale Out Solution aggregated the total storage node bandwidths to support simultaneous processing with multi-platform support for use on different editing software and rendering systems. Not only does using Scala Storage allow for higher file utilization on major storage infrastructures, it provided a reliable storage system for injecting, editing and exporting digital assets, streamlining workflow, and improving overall efficiency.

Rendering Platform Details

- Visual Effect: Pixel Renderman
- 3D Rendering Platform: Autodesk Maya 3D animation software
- Over 100 rendering servers, rendering over thousands of rendering commands, concurrent rendering, and reading materials independently for rendering calculations

Business Challenges

- Footage and other assets are centralized for editors and rendering cluster.
- Low storage utilization and difficulties in management due to too many different storage technologies: DAS for editing stations, NAS for shared storage and SAN for rendering cluster.
- Performance limitations due to bottlenecking from storage interface.



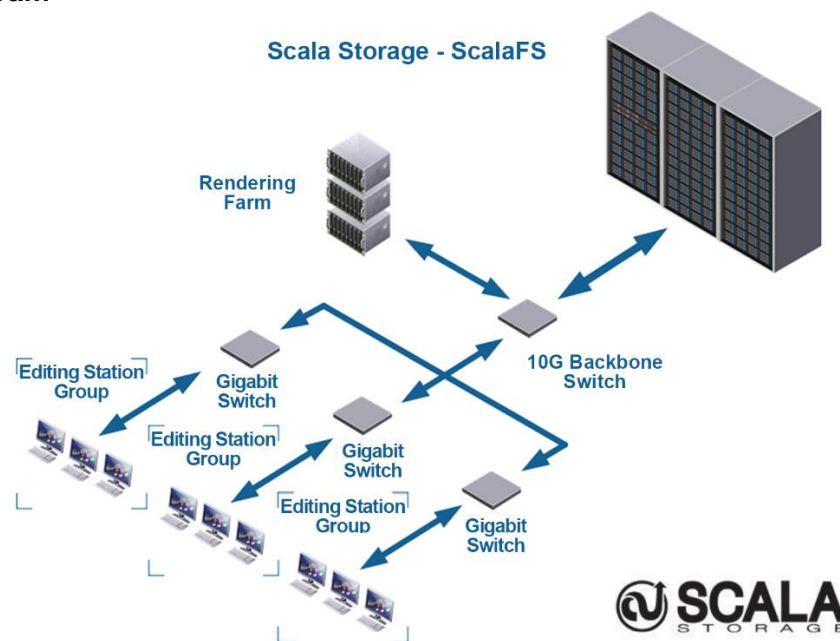
Solutions – Scala Storage Scale Out Storage Solutions

- First Deployment: 144TB, Three iStore Storage Node
- Current configuration: 500TB, Ten iStore Storage Node

Benefits

- Supports over 400 editing workstations and over 100 Linux rendering farms running simultaneously.
- Dedicated metadata controller allows for the highest read/write performance and super-fast file retrieval, providing file retrieval over hundreds of thousands per second, dramatic lower rendering calculation's I/O and increasing rendering platform and 3D editing and creating platform efficiency.
- Scale out structure allows flexibility to increase online storage size and performance. No longer rendering the platform's expansion limitations of capacity and performance as a concern.
- High availability features, including fail-detection, auto self-healing, and no single point of failure allows for 24x7 continuous work flow with no downtime.
- Simple storage management information allows for a single user interface to manage the metadata controller and iStore storage node, along with providing client status.
- Effectively lower the total cost of ownership while allowing to dynamically increase and decrease storage and performance with ease, providing flexibility to allow rendering farm's cluster requirement increase in a short period of time.

Solution Diagram



About Scala Storage

Scala Storage has redefined storage solutions to solve these challenges with Scala Storage Scale Out System, Scala File Systems and ScalaManager. These storage solution implementations are designed for enterprise, private/ public cloud computing, and are delivered across a variety of industries. Scala Storage is scalable from hundreds of terabytes all the way up to petabytes, while still providing predictable increasing linear performance and high availability storage structure. The Scala Storage family delivers extreme capacity and performance, and significantly reduces an organization's capital expense, operational expense and total cost of ownership.