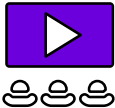
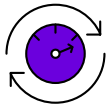


Blockbuster Storage Performance for Media and Entertainment



CHALLENGE

Long render times and poor scalability threaten project timelines



SOLUTION

Extreme performance at scale for faster project completion



HIGHLIGHTS

10x higher IOPs, 16x greater throughput, and 80% lower cost

INTRODUCTION

Production, post-production, and broadcast professionals face ever-increasing demand for more content to be delivered to more places, any time and on any device. Multi-camera, multi-gigabyte raw downloads, emerging VR and AR formats, and large render farms present very challenging workflows for storage. The shift to Ultra HD, 4K, and now 8K formats, generate 10 times higher data rates (18GByte/s*) and capacity (64GByte/hour*) than before. 8K Digital Cinema generate more than 13 times the equivalent 4K format. Animation and CGI at these resolutions requires render farms with enormous compute power.

Media workflows are only as solid as the foundation they are built upon. An approach used by many production and post-production facilities is to combine traditional SAN with NAS systems to achieve needed performance and contain costs. Unfortunately, this model does not scale well. It is not uncommon to provision thousands of render nodes to meet the project timeline. If storage system performance cannot be easily scaled to support the render farm, it would have to be broken into smaller chunks, which creates additional complexity, overhead, and slows down the overall project. This and other challenges with capturing and editing high-resolution content are causing facilities to rethink their approach to compute, storage, and the cloud.

IMPROVE COLLABORATION AND EFFICIENCY

When storage systems are dedicated to single workflows, such as one system for rendering and another for non-linear editing, the productivity lost between workflows and the cost associated with dedicated silos of underutilized storage is significant. The Weka File System (WekaFS™) from WekaIO™ (Weka) breaks down the silos by combining the performance of SAN-based technology with the usability of centralized scale-out NAS into a single software-based storage platform. Content creators need immediate shared access to project files to collaborate more effectively. WekaFS centralizes content and enables simultaneous, seamless file sharing via a distributed global namespace. Support for industry standard access protocols such as NFS, SMB, S3 and REST, means files can be concurrently accessed from any part of the workflow—eliminating the need to make additional copies.

As a software-only solution, WekaFS can be deployed in hyperconverged, dedicated storage server, or mixed deployment models using off-the-shelf hardware. In hyperconverged mode, WekaFS can run on your existing compute cluster (Figure 1) with zero additional footprint—saving on floor space, power and cooling costs. Running in the cloud is easy and gives facilities the agility to respond to peak needs on-demand. Spin up a compute cluster when you need more rendering capacity, and when you are done, the data remains protected and accessible.

UNLEASH CREATIVITY WITH SCALABLE PERFORMANCE

Lagging performance, whether due to higher resolutions or just more projects requiring multiple simultaneous editing, rendering or playback, exposes the limits of traditional storage infrastructure. WekaFS addresses the performance challenge with highly scalable on-demand shared storage designed to leverage the performance of flash using SATA, SAS, or NVMe SSD technology. Weka can be quickly configured to support demanding media workflow requirements. Ideal for demanding workloads such as rendering that access millions of small files, WekaFS seamlessly scales to thousands of compute nodes delivering linear performance at sub-millisecond latency, in the cloud or on-prem.

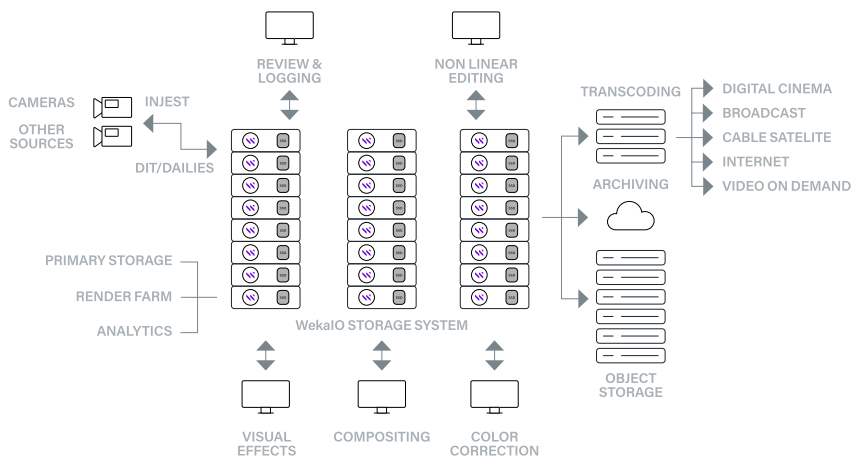


Figure 1 – Weka hyperconverged storage architecture

AVAILABILITY AND ACCESSIBILITY OVER THE LONG-TERM

Weka allows creative teams to focus on content creation instead of fighting the limitations of legacy storage infrastructure. Patented data protection intelligently distributes data across the entire file system to deliver twice the resiliency of RAID 6 or triple replication with lower capacity overhead. WekaFS can tolerate double the number of concurrent failures vs RAID 6, significantly lowering the risk of data loss. Production and post-production facilities get continuous system and application availability without sacrificing performance or cost.

The value of content does not end after the project is completed, its long-term value lies in the ability to reuse it over time. Weka makes it easy to leverage the cost benefits and scale of the cloud by tiering cold data in the background to any S3, REST, or Swift compatible object store (private or public). All files remain part of the global namespace and appear local to users and applications. Integrated policy-based tiering allows directories, files, or portions of a file to be automatically and seamlessly migrated without having to buy special software. An intuitive management console makes system management, visualization, and reporting a snap.

CONCLUSION

Production and post-production facilities share common challenges dealing with ever-increasing file sizes, shorter timelines, and tighter budgets. To be successful, these organizations realize that to better utilize their computing and storage systems, they need to consolidate silos into a common shared infrastructure and manage the explosion of data more effectively. Weka is a flexible, high performance, scalable storage solution that is ideally suited to address these challenges.