ABOUT OPENDRIVES

OpenDrives makes faster, more efficient data storage, designed and optimized for media & entertainment. The OpenDrives team grew up in the industry and has a deep understanding of the current and future challenges of media workflows. This ingrained understanding allows OpenDrives to develop NAS systems to solve for the number one data storage concern of content creators: ensuring that the technology works at the speed of creativity.

OpenDrives technology is purpose-built to accommodate the increasingly demanding throughput requirements of both compressed and uncompressed workflows at 4K, 6K, and 8K resolutions. Expandable up to multiple Petabytes of file-agnostic storage, OpenDrives platforms supports every file format and every media workflow, from initial media creation and ingest to editing, compositing to rendering, color correction on thousands of ProRes, DNx, DPX or EXR files, to real time data management and production, to content delivery and long-term archive. OpenDrives delivers unmatched shared performance and efficiency to support media production use cases at studio facilities small and large.

The core driver of OpenDrives is OPUS, a performance optimized operating system that combines with proprietary hardware configurations to deliver maximum sustained performance and efficiency. Through OPUS, every OpenDrives system is optimized to allow customers to consolidate siloed workloads and reduce environmental complexity. Some of the main features and technologies driven by OPUS include:

**Smarter Storage** – Logical data striping and protection that eliminates the hazards and limitations of traditional hardware RAID configurations while also adding new improvements, such as minimizing drive rebuild times and efficiently aligning write data, on-the-fly, to variable block sizes.

**Simplicity** – A single storage system that eliminates complexity – Multiple users working from the same shared volume with every user benefitting from the aggregate speed of the entire installation. No manual divisions of hardware resources or compartmentalization of content into fixed size workspaces is necessary.

**Acceleration** – Data access with up to 18+ GB/s (144 Gbps) of aggregate throughput from a single, deployment and small footprint to power high performance workgroups or entire facilities.

**Uninterrupted Productivity** – Use OpenDrives expansion nodes to scale seamlessly with no downtime, and keep creative teams working with highly resilient content storage.

**Savings** – Because all OpenDrives products offer zero-downtime expansion, customers buy only what they need, when they need it. With a lower cost per TB, storage utilization rates in excess of 80%, and built-in enterprise technologies like snapshots, replication, quotas, and inline compression you can maximize your return on investment.

ARISTA

Arista Networks was founded to pioneer and deliver software-driven cloud networking solutions for large data center storage and computing environments. Arista’s award-winning platforms are focused on building 10/40/100 Gigabit Ethernet (GbE) switches that redefine network architectures, bring extensibility, agility, and resilience to networking and dramatically change the price/performance of data center networks. In media and
entertainment, Arista has aligned to industry leaders and is deeply involved in the evolution and standards of today’s and next-gen media workflows. Committed to open standards, Arista is also a founding member of the 25/50GbE consortium.

At the core of Arista’s platform is the Extensible Operating System (EOS™), a ground-breaking network operating system with single-image consistency across hardware platforms, and modern core architecture enabling in-service upgrades and application extensibility. Some of the main features and technologies driven by EOS include:

- Wire-rate performance at 1/10/25/40/50/100GbE
- Big buffers and dynamic buffering algorithms
- Predictable end-to-end low latency
- Advantages of Cloud Economics for media networks
- Self-healing EOS architecture for higher reliability
- Granular network telemetry to understand infrastructure behavior and flows

**Solutions Overview**

Many media and entertainment applications and workflows are known for their high sustained performance requirements and low tolerance for bursty or “dropped” data. Historically, IP storage and switches would attempt to deploy against these tough applications, but would often fall down once RAM would fill, hardware RAID controllers couldn’t sustain data access rates, or switches dropped packets when oversubscribed ASICs were too busy or port buffers filled. Historically, this was combatted by deploying complex Fibre Channel SAN infrastructures and layered with costly file systems and client licensing.

OpenDrives and Arista’s industry leading technologies and operating systems bring those historical attempts to a working NAS reality by driving extremely low latency, high sustained throughput use cases to customers small to large. Both companies design their technologies to ensure that IO paths through the systems and processing overhead are minimized so data can be pushed at line speed concurrently to media attached systems. Any limitation or bottleneck in a media technology environment manifests itself at the content creator’s end, pulling them out of the natural flow and in turn resulting in lost time and efficiency. The OpenDrives and Arista solutions currently power multiple streams of uncompressed 8K or 100s to 1000s of streams of lesser bitrate content. The uninterrupted flow of content through the OpenDrives and Arista infrastructure often gets resounding feedback with how smooth it feels. One studio executive was overheard saying, "Wow, it just scrubs!"

In conclusion, OpenDrives pushes the boundaries of media storage performance enabling next generation resolution, HDR, and HFR workflows. Combined with the low latency, efficient switching, and big buffers of Arista switches, the joint solution ensures that your company will spend more time being creative and not waiting around for the copy jobs, transcodes, and spinning beach balls of project loads of the past.