Aspera – BlueArc

Breakthrough transport & storage solutions for ultra high-speed movement of digital media at global distances

In an effort to enable collaboration, scale to the business pipeline, contain costs and meet aggressive production schedules, media companies are transforming virtually every stage of the content creation process, from media acquisition, encoding post-production, delivery and archive. In order to fully realize the promise of these new file-based workflows, a highly-scalable and flexible technology infrastructure is needed to store, transform, exchange and distribute massive volumes of digital media content at global distances quickly, reliably and securely.

The need: enabling global data movement in file-based workflows for media and entertainment with unprecedented cost-effectiveness and performance.

- **Live event coverage & on-location production:** fast-turnaround operations such as television news, live events or user-generated content contribution, demand the ability to transport files from some of the world's most remote locations quickly and securely.
- **Global collaboration:** the dynamic nature of media production, and the global distribution of its numerous contributors require practical data transfer times, as well as total security and reliability.
- **Online media services:** media platform and services companies that host, manage and monetize user-generated content (UGC) need to ingest data 24x7. Huge numbers of files need to be stored, transformed and distributed within timelines that meet consumer and business expectations.
- **Software and game development:** collaboration and production in software and game development is inherently global, with internal and external contributing teams that are often spread around the globe. Software complexity and the inclusion of rich media content continue to drive exponential growth of file sizes..

To achieve these goals, organizations turn to wide area network (WAN) infrastructures. Traditional TCP-based network transfer protocols like FTP and HTTP, however, fall short when tasked with moving incredibly large amounts of mission-critical media files over great distances.

And potential bottlenecks aren't limited to global network conditions. Storage architectures play a crucial role in high-speed media transfer ecosystems. For example, in WAN environments, storage devices must keep up with high-speed networks by providing sufficiently fast disk read/write speeds. Modern file-based media workflows typically involve large uncompressed video, digital cinema or stereoscopic 3D files or sets of files, each totaling many gigabytes or even terabytes in size. When moving these types of files, another potential bottleneck lurks in the short path between the computer endpoint transferring the data to the storage appliance.

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The Aspera / BlueArc high-performance transport and storage solution

BlueArc Mercury and Titan storage systems and Aspera's fasp software allow utilization of storage throughput and public and private WAN bandwidth, regardless of network distance, at high performance rates. This dramatically cuts wait times for media files, increasing productivity and resource utilization, as well as service and workflow efficiency.

Maximum performance with 6Gbps global WAN transfers – by eliminating the inherent throughput effects of latency and packet loss, Aspera's patented fasp transfer protocol enables file transfer speeds that scale linearly with the available WAN bandwidth, enabling media companies to match their technology and network investments with their business needs.

For example, it will take FTP as long as two hours to transfer a 1GB file across the US taking as long as two hours, regardless of the available bandwidth – this is primarily due to the adverse effects of transfer distance on the performance of TCP-based protocols. Thanks to its distance-independent design and perfect efficiency against packet loss events, Aspera will move that same 1GB file in just 70 minutes on a 2Mbps link and in a mere 8.4 seconds over a 1Gbps connection..

Pushing the boundaries of transfer performance: Aspera software coupled with a BlueArc storage platform will yield up to 6Gbps of data throughput over the wide area. This enables organizes to fully realize the potential of a 10Gbps WAN infrastructure. At 6Gpbs, 1TB of data can be transferred in about 20 minutes, irrespective of distance – a 2000x improvement over FTP under moderate packet loss conditions.

Extensive deployment options with bulletproof security and reliability built-in – the Aspera software suite is built upon a highly flexible, open and cross-platform architecture that supports Windows, Linux, Mac OS X, iOS (iPhone and iPad) and UNIX operating systems. Aspera software can be deployed to interconnect any client, server and storage combination, enabling WAN-independent access to essential data. Aspera also offers C++, .NET, and Java APIs, allowing application (web, desktop, embedded, proprietary) integration and file transfer automation

Aspera file transfers have the ability to utilize AES 128-bit cryptography for on-the-fly transfer encryption. Secure user authentication with strict file ACL enforcement enables policy based control over data access. File transfers are monitored end-to-end, enabling strict policing, reporting and tracking of all asset transfers and user activity.

Summary

Aspera software is capable of exceeding the WAN transfer performance and scalability limits of traditional CIFS and NFS protocols in network-attached storage environment. With BlueArc's industry-leading performance and suite of optimization tools for data management, broadcast, media and entertainment companies leveraging Aspera technology on the BlueArc Mercury and Titan storage platforms can move terabytes of data, globally, in a matter of minutes rather than days.

About BlueArc

At BlueArc, we know that lightning fast storage is the accelerator to your driving great visual results. In media and entertainment, we deliver stop watch metrics: reducing rendering times from hours to minutes, and file access times from minutes to seconds. In CGI development, quality and speed are vital. BlueArc lets artists create more revisions and dramatically speeds render farm output fueling extraordinary productions on schedule while reducing costs. BlueArc's Storage solutions scale with your digital workflow and BlueArc's tiered storage enables a more cost effective digital workflow. Scale Bigger, Store Smarter, and Accelerate Everything.

BENEFITS OF ASPERA AND BLUEARC HIGH-PERFORMANCE FILE TRANSFER ENVIRONMENTS:

- **Reduce media file transfer times and improve efficiency and productivity**
  - Get multi-Gbps transfers allow the use of 10Gbps WAN connections, allowing for the movement of massive amounts of data, regardless of distance or packet loss
  - Meet demanding production schedules and get maximum resource efficiency
  - Fully automate, schedule and monitor file transfers as part of a file-based workflow
- **Reduce operational and productivity costs**
  - Improve bottom-line performance with increased productivity and resource utilization through decreased wait times
  - Protect data with full transfer encryption (in transit and at rest), secure user authentication, reliable data delivery and complete data integrity.
  - Automate storage functions such as file replication, data backup and disaster-recovery protocols to minimize costs

About Aspera

Aspera is the creator of next-generation transport technologies that move the world's digital assets at maximum speed regardless of file size, transfer distance and network conditions. Based on its patented fasp™ protocol, Aspera software fully utilizes existing infrastructures to deliver the fastest, most predictable file transfer experience. Aspera's core technology delivers unprecedented control over bandwidth, complete security and uncompromising reliability. Over one thousand organizations across a variety of industries on six continents rely on Aspera software for the business-critical transport of their digital assets. Please visit www.asperasoft.com for more information.

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