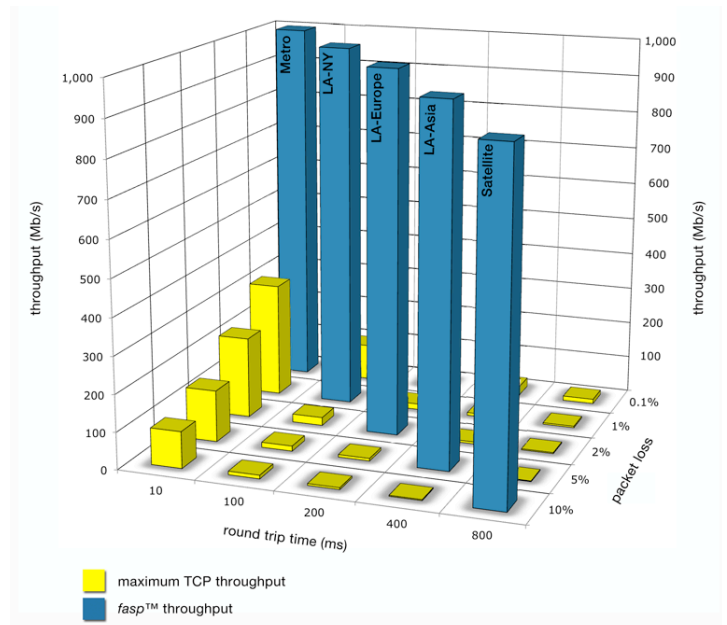


HP StorageWorks X9000 Network Storage Systems

The HP StorageWorks X9000 Network Storage Systems scale out beyond traditional network-attached storage in both capacity and performance. Designed to be extremely scalable, flexible, and cost-efficient, HP StorageWorks X9000 Network Storage Systems deliver excellent performance and a modular storage infrastructure to accommodate unprecedented storage growth and throughput. Central management allows the administrator to manage not just terabytes but multi-petabyte environments at the highest density possible. The pay-as-you-grow architecture and an all-inclusive feature set eliminates storage over-provisioning or expensive add-ons. The X9000 is the platform for customers designing the next generation data center.

Aspera's *fasp*: Next-Generation Bulk Data Transport

Aspera is the creator of next-generation transport technologies that move the world's big data at maximum speed, regardless of file size, transfer distance and network conditions. Based on its patented *fasp* protocol, only Aspera software fully utilizes existing infrastructure to deliver the fastest, most predictable file transfer experience. Aspera's core technology delivers unprecedented control over bandwidth, complete security and uncompromising delivery reliability. Hundreds of organizations, across a variety of industries, rely on Aspera for the business- and mission-critical transport of their digital assets. With a flexible and open architecture, Aspera provides multiple deployment options, including purpose-built software applications, easy integration with internal systems, and direct compatibility with numerous solutions from industry-leading technology partners.



Obstacles to High-Speed Bulk Data Transfers

TCP-based applications (like FTP, HTTP, CIFS and NFS), ensure the reliable delivery of data, but over distance (WAN networks) throughput performance can be severely constrained by latency/round-trip-time (RTT) and packet loss. This creates significant inefficiencies in moving data, resulting in underutilized resources and lower user productivity.

Aspera's patented *fasp* protocol is an innovative bulk-data transport technology, providing a superior alternative to traditional TCP-based solutions. *fasp* works over any public and/or private IP network; it is implemented at the application layer, allowing easy deployment within the enterprise by re-using existing client, server, operating system and networking technologies. *fasp* is designed to deliver 100% bandwidth efficient transport of bulk data – independent of network delay, packet loss, and data size.

HP and Aspera for Digital Media Applications

Example #1: Content supply chain

Aspera's broad operating system support and feature-rich API allows for seamless integration into tapeless broadcast play-out environments and content readying. *fasp*'s any size, any distance, any network approach allows content to be directly sourced from HP Network Storage System X9000 to ingest servers. Bandwidth scalability allows for just-in-time data delivery and concurrent file ingest, and bandwidth control allows for priority scheduling of content. The *fasp* API allows for workflow automation, working in full harmony with scheduling applications. Additionally, the HP StorageWorks X9000 designed on a very modular architecture allows scaling of bandwidth and capacity for performance centric environments to increase the incremental file transfer performance.

Example #2: Collaborative media production

In addition to the data access benefits delivered by *fasp* (outlined above), Aspera's application suite supports multiple methods of end-user data interaction, wired or wireless. Users can access remote content, directly from HP StorageWorks X9000 for near-line storage, NLE and project collaboration. For data access, Aspera offers standalone client applications (Desktop, Web or Mobile), embedded technology deployed within end-user applications, or using plug-ins – all furthering the access-from-anywhere data paradigm. Additionally, Aspera has a suite of collaboration products that facilitate internal and/or external data exchanges. This substantially decreases archive retrieval times, facilitates multisite data access, and scales to support highly concurrent end-user access. In conjunction with Aspera, the HP StorageWorks X9000 can be deployed at the origin site, or at the edge location, to provide high performance storage for collaborative workflows.

Example #3: Content archive

The HP StorageWorks X9000 is an optimized content repository that allows customers to not only access the content anytime but also to store content cost effectively. As with the ingest challenges seen with play-out servers, getting data to, from and between video archives poses similar challenges. Digital asset management, data migration, multisite replication, end-user access, long-term archive, tapeless workflow, and disaster recovery planning requires fast and efficient file delivery. Aspera's application servers are certified to run with HP StorageWorks X9000 and *fasp* transport enables full use of the source-to-destination bandwidth - which allows delivery times, business goals and production SLA's to be met. The Aspera API delivers full integration into content archive and storage management solutions; protecting existing or future technology investments.

HP Scalable NAS and Aspera – Delivering value to customers

Aspera and HP are committed to delivering a superior value to customers by improving workflow efficiency and by optimizing content storage and delivery. Together with Aspera's *fasp* digital transport technology and HP StorageWorks X9000, customers can streamline file-based workflow and collaborate more efficiently and effectively, greatly improving time-to-market and project efficiency.

For more information on Aspera, HP StorageWorks X9000 and the media solutions offering , please visit:

www.hp.com/go/X9000

www.hp.com/go/cme

www.asperasoft.com

