CHELSIO FURTHERS EXPANSIVE STORAGE CONNECTIVITY, EMPOWERING HIGH-ROI, HIGHLY EFFECTIVE APPLICATION DEPLOYMENTS

Showcases Multiple Storage Networking Solutions for 100 Gigabit NVMe-TCP (TOE), NVMe-oF (iWARP), and iSCSI at Storage Development Conference 2021

STORAGE DEVELOPER CONFERENCE/SUNNYVALE, CA – September 27, 2021– Chelsio Communications, Inc., a leading provider of high performance (1Gb/10Gb/25Gb/40Gb/50Gb/100Gb) Ethernet Unified Wire Adapters and ASICs for storage networking, virtualized enterprise datacenters, cloud service installations, and cluster computing environments, today announced a set of storage demonstrations and performance benchmark results which showcase how hyperscale customers can optimize application performance and return-on-investment (ROI) using NVMe-TCP (TCP Offload Engine), NVMe-oF (iWARP) and iSCSI technologies at the annual Storage Developer Conference, which will be on September 28-29.

"The elevated performance requirements of emerging storage architectures necessitate superior performance from the networking technology for customers to achieve the true effectiveness of their data centers and the data they retain," stated Kianoosh Naghshineh, CEO at Chelsio Communications. "Enterprises have been unambiguous that they want to deploy flash storage across hundreds to thousands of servers using the most cost-effective and efficient networking available to maximize their return on investment. T6 Unified Wire Adapters provide such access using a variety of offloaded protocols to reduce CPU utilization, increase bandwidth and IOPs, and reduce application sensitivity to packet drops and jitter on the wire."

"Continued growth of cloud and edge workloads are placing more demand on data infrastructure resources," said Greg Schulz, Sr. Analyst StorageIO. "Fast applications need fast I/O and compute including server, storage and I/O network offloads to boost not only efficiency, also productivity effectiveness. TOEs are a great solution to offload core server compute freeing up those resources for other productive tasks like the value benefit GPUs provide in freeing up compute cycles through offloading graphics and AI/ML workloads."

During the Storage Developer Conference (September 28-29, 2021), Chelsio will demonstrate the following technologies that illustrate how T6 Unified Wire adapter solutions offering high-speed Ethernet storage networking complement emerging data center micro-services application and disaggregated storage architectures in the company's virtual booth:

- 100G Kernel and User Space NVMe/TCP Using Chelsio TOE for low-latency access to NVMe SSD storage.
- NVMe Over Fabrics network access to NVMe devices with industry leading high performance and low latency 100GbE iWARP RDMA.
- 100G iSCSI Protocol Offload-based access to flash storage with extremely high throughput and IOPs.

The APIs for the above protocols have been the same since the first 10GbE implementation of Chelsio's Unified Wire architecture and are expected to remain the same at future, higher Ethernet speeds, thus enabling the customers to leverage their software investment with the next generation of Chelsio's Unified Wire architecture. This continuity is achieved by T6 silicon's underlying data flow processor architecture which has not changed since 2000 and is expected to continue to scale to higher speeds.

In addition, Chelsio will be participating in a Birds of a Feather (BoF) session entitled "No-compromise NVMe/TCP deployment using server storage I/O offload". NVMe is the industry standard high-performance interface for accessing PCIe SSD devices. NVMe/TCP extends

NVMe beyond the confines of a PCIe fabric by utilizing a low latency Ethernet/TCP/IP network to attach NVMe devices. NVMe/TCP is unique in its scalability and reach, practically eliminating constraints on the architecture, size, and distance of a storage network. The BoF will be moderated by Greg Schulz, Independent Industry Analyst & Author, StorageIO™ and will include review of NVMe/TCP performance results using Chelsio T6 Unified Wire TCP Offload Engine (TOE) to illustrate the benefits in performance and efficiency of the new fabric, opening the way to unprecedented storage performance and scale. The session is scheduled for Wednesday September 29th 3-4PM.

Additional Resources

[100G Kernel and User Space NVMe/TCP Using Chelsio TOE](#) (Technical Brief)

[100G SPDK NVMe over Fabrics](#) (Technical Brief)

[Demartek Evaluation: Chelsio Terminator 6 (T6) Unified Wire Adapter iSCSI Offload](#) (Technical Report)

[Windows Server Storage Spaces Direct (S2D) performance with Chelsio T6 Unified Wire 25GbE](#) (Technical Brief)

About Chelsio Communications

Chelsio is a recognized leader in high performance (1Gb/10Gb/25Gb/40Gb/50Gb/100Gb) Ethernet adapters for networking and storage within virtualized enterprise datacenters, public and private hyperscale clouds, and cluster computing environments. With a clear emphasis on performance and delivering the only robust offload solution, as opposed to simple speeds and feeds, Chelsio has set itself apart from the competition. The Chelsio Unified Wire fully offloads all protocol traffic, providing no-compromise performance with high packet processing capacity, sub-microsecond hardware latency and high bandwidth. Visit the company at www.chelsio.com and follow the company on [Twitter](#) and [Facebook](#).

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