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CHELSIO DEMONSTRATES INDUSTRY-LEADING 40GbE iSCSI PERFORMANCE

Chelsio T5 Adapters Deliver Highest Throughput and Lowest CPU Utilization For Industry-Standard Ethernet Storage Networking

SUNNYVALE, CA – August 11, 2015 – Chelsio Communications, Inc., a leading provider of Ethernet adapters for virtualized enterprise data centers, cloud service installations, and cluster computing environments, today announced that it is demonstrating the benefits of its T5 line of protocol offload adapters that make them the best performing 40GbE iSCSI HBAs in the market. Chelsio will be holding this demonstration in Booth #710 at the Flash Memory Summit in Santa Clara, CA.

Showcasing the iSCSI hardware offload capabilities of Chelsio's T5 40Gbps Unified Wire adapters, the demonstration will show how all-flash and hybrid storage array OEMs can easily enable such arrays with industry-leading iSCSI target performance that is fully compatible with the existing iSCSI ecosystem and seamlessly supports the routability, scalability and reach advantages of iSCSI.

The demonstration compares Chelsio's T580-CR and Intel's latest XL710 "Fortville" server adapters running at 40Gbps. The results confirm that Chelsio's T580 provides consistently superior iSCSI performance, lower CPU utilization, higher throughput and drastically lower latency, with outstanding small I/O performance. The T580 notably delivers line rate 40Gbps at the I/O sizes that are more representative of actual application use (see [benchmark report](#)).

"Our T5 Unified Wire adapters enable an extremely high performance iSCSI storage target solution that is also very efficient," said Jim Johnston, senior director of marketing at Chelsio. "Chelsio's iSCSI offload technology enables 40 Gigabit Ethernet to completely supplant



proprietary storage fabrics, without requiring the deployment of new protocols that force an infrastructure forklift upgrade – exactly what the industry needs. We’re continuing to push the price-performance curve and delivering industry-leading solutions for the flash storage array market.”

iSCSI vs. ISER

iSCSI, the Internet SCSI standard, is the leading Ethernet SAN protocol, with native initiator support integrated into all the major operating systems, and offers built-in RDMA for high performance offloaded implementations which, unlike the iSER (iSCSI over RDMA) protocol, does not break compatibility with the existing iSCSI ecosystem.

The high-performance enabled by Chelsio’s hardware offloaded iSCSI removes the need to forgo iSCSI’s installed base to achieve high performance. Benchmarking results demonstrate that iSCSI at 40Gbps provides the same performance in throughput and CPU utilization as iSER, thanks to built-in RDMA that is optimized for SCSI storage. iSCSI preserves existing equipment without requiring a fabric overhaul, additional acquisition and management costs, with a high performance option thanks to hardware offload, and a strong roadmap to 100Gbps and beyond. iSER, on the other hand, adds unnecessary layers, and is merely a way for RDMA fabrics to offer iSCSI emulation, that is incompatible with the installed software base (see [benchmark report](#)).

“The iSER protocol was developed for non-Ethernet fabrics that have inefficient support for the Internet Protocol (IP) stack but provides little benefit compared to hardware offloaded iSCSI for Ethernet networks,” says Saqib Jang, Principal/Founder, Margalla Communications. “Unlike iSCSI, which is natively supported in all major operating systems, iSER suffers from significant interoperability and deployability challenges.”

About Chelsio Communications

Chelsio is a recognized leader in high performance (10G/40G/100G) Ethernet adapters for networking and storage within virtualized enterprise data centers, public and private



hyperscale clouds, and cluster computing environments. Chelsio's innovative, fifth generation protocol acceleration technology (T5) powers its high performance 10G/40G Ethernet adapters with a clear roadmap for 25G/100G Ethernet solutions in 2016. 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.

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