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## **CHELSIO ADAPTERS ACHIEVE WINDOWS SERVER 2016 AND SOFTWARE-DEFINED DATACENTER (SDDC) CERTIFICATIONS**

**100Gb iWARP (RDMA/TCP) Networking Enables Dramatically Improved Storage Performance and Lower Total Cost of Ownership for Microsoft Cloud Environments**

**SUNNYVALE, CA – March 21, 2017** – Chelsio Communications, Inc., a leading provider of high performance Ethernet adapters for storage networking, virtualized enterprise datacenters, cloud service installations, and cluster computing environments, today announced that its line of Terminator 5 & 6 (T5 & T6) 1/10/25/40/50/100 Gigabit Ethernet (GbE) iWARP (RDMA/TCP) enabled Unified Wire adapters have achieved “[Certified for Windows Server 2016](#)” and “[Certified for Microsoft Software-Defined Datacenter \(SDDC\)](#)” hardware certifications.

The iWARP standard enables building very efficient, high performance, Microsoft Cloud deployments very quickly. iWARP works with any legacy Ethernet switch, thereby enabling incremental Windows Server 2016 installations without requiring a concurrent forklift upgrade of the switch infrastructure, or the entire datacenter. This ability to work with any non-DCBX switch, allows use of the most cost effective new or existing switch infrastructure with the least amount of support, while enabling an immediate plug-and-play deployment. In addition, Microsoft’s support of iWARP protocol since Windows Server 2012-R2 release, has allowed for years of testing for a very robust, tested, deployment with iWARP.

As a long-standing partner of Microsoft, Chelsio invests heavily in joint engineering resources and expertise to test and validate upcoming versions of Microsoft Windows software on Chelsio networking infrastructure. Continuing on this long tradition of cooperative



engineering, Chelsio is committed to delivering broad high-performance iWARP networking adapter support for Windows Server 2016 environments as well as for Windows 10 Enterprise.

Chelsio iWARP enabled Unified Wire adapters power a range of Microsoft Windows capabilities including Storage Spaces Direct software-defined storage, Storage Replica for disaster recovery, SMB Direct for high performance file access, Network Direct for Windows HPC deployments, hardware offloaded iSCSI initiator for SAN applications, Nano Server for cloud applications and Client RDMA for bringing RDMA benefits to Windows 10 deployments.

“Chelsio’s T5 & T6 based solutions enable high-performance networking solutions for Windows installations without requiring a concurrent upgrade of the switch infrastructure and help customers to efficiently and cost-effectively scale their Microsoft Cloud environments to derive the full benefit of cloud computing,” said Kianoosh Naghshineh, CEO at Chelsio Communications. “This announcement represents the enormous value derived through joint collaboration to help customers transform and accelerate their journey to the cloud.”

“iWARP is the preferred high performance RDMA over Ethernet solution for Microsoft private clouds, and allows leveraging existing Ethernet infrastructure without the limitations, complexity and costs of other RDMA protocols,” said Daniel Weissenborn, Enterprise Architect at ClearPointe, a Gold level Microsoft datacenter partner. “Chelsio adapters have proven to be zero fuss, high throughput and low latency, exactly what you need to fully leverage and scale high performance Software Defined Datacenters.”

### **Storage Spaces Direct Throughput Performance Demonstration**

Chelsio in conjunction with Microsoft demonstrated Windows Server 2016 Storage Spaces Direct operation using the Chelsio T6 100GbE iWARP RDMA adapters in a high-performance storage solution.



The demonstration utilizes a 4-node Storage Spaces Direct hyper-converged configuration, NVMe SSD technology, and DRAM connected across an iWARP RDMA-enabled fabric. iWARP is the preferred high performance RDMA over Ethernet solution from Cluster to Cloud scale, and allows leveraging existing Ethernet infrastructure without the limitations, complexity and costs of other RDMA protocols. Chelsio iWARP RDMA adapters have also been proven to deliver the highest IOPS (input/output per second) and low latency needed to fully leverage high performance Microsoft Storage Spaces Direct.

Additional information regarding the Storage Spaces Direct throughput demonstration is available in a Microsoft published [blog post](#) and [twitter message](#), and a Chelsio [Technical Brief](#).

The Storage Spaces Direct throughput demonstration announced today follows an earlier demonstration of Windows Server 2016 Storage Spaces Direct using the Chelsio T5 40GbE iWARP RDMA adapters conducted in conjunction with Microsoft which showed Chelsio T5 cards enabling 6 million IOPS performance for a storage solution. Additional information is presented in an earlier-issued Chelsio [Press Release](#) and [video collage](#) of pertinent Microsoft sessions at Ignite 2016.

### **Chelsio Windows Solution**

- Server 2016 SMB Direct Offload
- Storage Spaces Direct Offload
- Network Direct Offload
- Packet Direct
- iSCSI Initiator Offload
- Windows 10 – Client RDMA Offload for client-server applications
- Nano Server
- Storage Replica
- NVGRE, VxLAN Offload support
- SR-IOV support



- vRSS, VMMQ support
- DCB
- Azure Stack Certified for all Adapter SKU's
- Server 2016 and 2012-R2 Certified for all Adapter SKU's
- Windows 10 Certified for all Adapter SKU's
- 1/10/25/40/50/100Gb Hardware Adapter options

### **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](http://www.chelsio.com), and follow the company on [Twitter](#) and [Facebook](#).

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