



Broadcom Delivers First-Ever NVMe over Fibre Channel In-Box Drivers for VMware ESXi 7.0

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Emulex HBAs by Broadcom Deliver More than Twice the Performance for Virtual Machines Running on ESXi 7.0 with NVMe over Fibre Channel

SAN JOSE, Calif., April 28, 2020 (GLOBE NEWSWIRE) -- [Broadcom Inc.](#) (NASDAQ:AVGO) announced today its Emulex Fibre Channel Host Bus Adapters (HBAs) are the industry's first-ever HBAs to provide full support for VMware ESXi 7.0, delivering high-performing, NVMe over Fibre Channel, for applications running on ESXi servers. With support from major storage vendors, operating systems and hypervisors, Broadcom Fibre Channel will provide a complete, hardened ecosystem— an NVMe industry first.

"We are thrilled that VMware has partnered with Broadcom to deliver the first and only in-box NVMe over Fibre Channel HBA solution for ESXi 7.0," said Jeff Hoogenboom, vice president and general manager, Emulex Connectivity Division, Broadcom. "VMware's in-box inclusion of Emulex's HBAs validates that NVMe over Fibre Channel is ready for enterprise production deployment today and that the application performance improvements and CPU utilization benefits of NVMe over Fibre Channel are real and material."

"VMware is very excited to introduce NVMe over Fabrics based SAN infrastructure for its data center in broad collaboration with Broadcom and rest of our storage eco-system partners," said Sudhanshu Jain, director of product management, VMware Inc. "NVMe over Fibre Channel based SAN connectivity in vSphere 7.0 will help customers to take advantage of performance enhancements, while leveraging existing SAN infrastructure."

Improved Performance

ESXi 7.0 and Emulex HBAs deliver stunning performance benefits using NVMe technologies for virtualized servers on a Fibre Channel SAN. Third-party validated test results show that compared to today's Fibre Channel protocol (FCP), running ESXi 7.0 with Emulex NVMe over Fibre Channel HBAs:

- improves Oracle Database 19c performance by up to 2.1x¹
- improves Microsoft SQL Server 2019 performance by up to 2.4x²

Complete Ecosystem Support

Fibre Channel is the first transport with complete NVMe over Fabrics eco-system support in production. From SAN switches by Brocade and Cisco, to storage arrays from vendors including Dell EMC, IBM, and NetApp, to every enterprise server vendor—all are shipping NVMe over Fibre Channel technology today. With VMware's ESX 7.0 release, NVMe over Fibre Channel is ready for production deployments.

"Fibre Channel has been the de facto standard for high-performance virtualized data centers for more than a decade," said Jack Rondoni, senior vice president and general manager, Brocade Storage Networking division, Broadcom. "Enabling a next-generation NVMe over Fibre Channel fabric is a seamless and simple transition that will break through current flash performance barriers. The combination of an ESXi 7.0 environment with a Brocade and Emulex NVMe over Fibre Channel fabric will set new standards for application performance and availability."

NetApp, VMware, and Broadcom have partnered to bring a robust and easy to deploy NVMe over Fibre Channel based SAN solution to enable faster connectivity between storage and servers, accelerating the performance of existing high-performance workloads.

"By bringing end-to-end NVMe over Fibre Channel to our customers, NetApp, alongside Broadcom and our ecosystem partners, are enabling customers to gain unparalleled performance at lower latencies, accelerating their return on investment on IT infrastructure," said Rajiev Rajavasireddy, vice president, Product Management for Foundational Data Services, NetApp. "With NVMe over Fibre Channel support and compatibility across the technology stack, these modern solutions offer customers the performance and reliability that they demand in supporting their mission critical applications."

"We were impressed with the Emulex HBA IO performance with VMware ESXi 7.0 server using the new NVMe over Fibre Channel feature," said Kevin Tolly, founder of The Tolly Group. "We validated transactional performance of a virtual machine running Microsoft SQL Server 2019 and saw that it improved by as much as 2.4x when running NVMe over Fibre Channel compared to traditional Fibre Channel SCSI connectivity."

Enterprise-class Networking Delivered by Fibre Channel Networks:

Fibre Channel delivers key benefits to enterprise storage environments including: coexistent support of SCSI FCP and NVMe over Fibre Channel on the same infrastructure, trusted network with proven security, full auto-discovery of storage resources, sequence level error recovery for NVMe over Fabric IOs, and boot from SAN for NVMe over Fibre Channel device capabilities.

Availability

Emulex In-Box NVMe over Fibre Channel Drivers for ESXi 7.0 are available starting April 2. Click [here](#) to download the release from VMware.

About Broadcom

Broadcom Inc. (NASDAQ: AVGO) is a global technology leader that designs, develops and supplies a broad range of semiconductor and infrastructure software solutions. Broadcom's category-leading product portfolio serves critical markets including data center, networking, enterprise software, broadband, wireless, storage and industrial. Our solutions include data center networking and storage, enterprise, mainframe and cyber security software focused on automation, monitoring and security, smartphone components, telecoms and factory automation. For more information, go to www.broadcom.com.

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¹ Tolly Test Report [here](#), document number 220117 forthcoming late April 2020

² Tolly Test Report [here](#), document number 220117 forthcoming late April 2020



Source: Broadcom Inc.