

8Gb Fibre Channel Scalability Advantage in VMware vSphere 5

QLogic 2500 Series Fibre Channel Adapter Outperforms Emulex—Best Performance and Scalability



QLogic 2500 Series 8Gb Fibre Channel Adapter performance scaled higher than the Emulex adapter as the number of VMs increased from one to eight.

INDUSTRY CHALLENGES

Server consolidation through virtualization of the enterprise data center improves server utilization and lowers data center capital and operational costs. IT administrators must ensure that none of the subsystems become a bottleneck for successful deployment of a virtualized and consolidated data center. The evolution of consolidated server deployments and the move to 8Gb Fibre Channel infrastructure requires higher scalability when connecting servers to storage.

To meet the growing requirements of consolidated and virtualized environments, enterprise IT administrators must deploy a scalable, high-performance adapter architecture that can address the demands from multiple virtual machines (VMs) and applications running simultaneously on a single physical server.

VIRTUAL MACHINE SCALABILITY

QLogic® performed head-to-head performance benchmarks showing the I/O performance and scalability advantages of the QLogic 2500 Series 8Gb Fibre Channel Adapter over the Emulex® LightPulse® 12000 Series 8Gb Adapter. QLogic compared the overall performance of these 8Gb adapters when attached to an industry-leading, solid-state storage array to emulate real-world VMware® vSphere® 5 environments. The results show that QLogic 2500 Series 8Gb Fibre Channel Adapters meet the demands of today's data center.

In vSphere 5 environments, the I/O performance depends on the workload generated by the VMs on a given vSphere host server. For the purposes of the performance benchmark, QLogic implemented a configuration scaling the representative workload of VMs from one to eight. The following figure illustrates how the QLogic 2500 Series 8Gb Fibre Channel Adapter performance scaled higher than the Emulex adapter as the number of VMs increased from one to eight. The figure displays the results—the QLogic adapter outperforms the Emulex adapter by 33 percent.



KEY DIFFERENCES

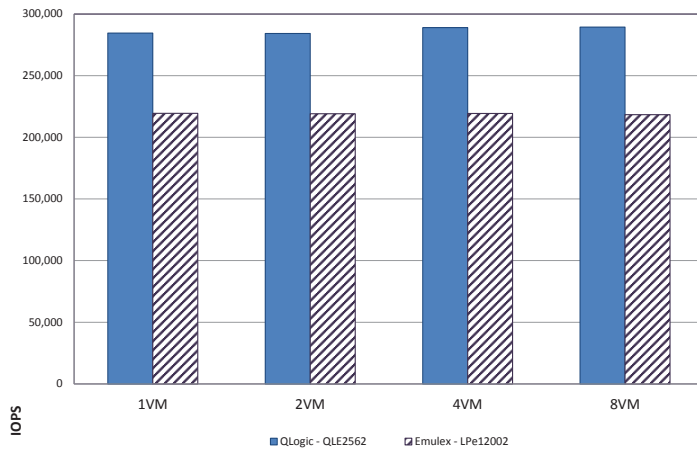
The QLogic 2500 Series Fibre Channel Adapter is the superior choice for data centers using VMware vSphere 5. The reasons include the following:

- **Proven Leadership.** According to Dell’Oro Group, QLogic is the market leader, with a double-digit lead over the nearest competitor. With more than 14 million ports deployed across multiple hardware platforms and operating systems, QLogic Fibre Channel Adapters have been field tested in enterprise data centers.
- **Higher Application Performance.** QLogic delivers increased scalability, better reliability, and higher customer service metrics for VMware vSphere 5 users.
- **Power Optimized.** QLogic StarPower™ technology allows the QLogic 2500 Series Fibre Channel Adapter to operate at 4.9W—an over 20 percent power advantage using Dynamic Power Management.
- **Enterprise Reliability.** QLogic adapters offer the highest levels of uptime as well as a proven Fibre Channel stack.
- **Warranty.** QLogic delivers the most reliable adapter backed by the industry’s only five-year warranty.
- **Manageability.** QLogic’s QConvergeConsole® delivers a Web-based, single-pane-of-glass management console for all generations of QLogic Fibre Channel Adapters.

ABOUT CAVIUM

Cavium, Inc. (NASDAQ: CAVM), offers a broad portfolio of infrastructure solutions for compute, security, storage, switching, connectivity and baseband processing. Cavium’s highly integrated multi-core SoC products deliver software compatible solutions across low to high performance points enabling secure and intelligent functionality in Enterprise, Data Center and Service Provider Equipment. Cavium processors and solutions are supported by an extensive ecosystem of operating systems, tools, application stacks, hardware reference designs and other products. Cavium is headquartered in San Jose, CA with design centers in California, Massachusetts, India, Israel, China and Taiwan.

VMware vSphere 5
8Gb Fibre Channel (Dual Port)
8kB Sequential RW



QLogic versus Emulex Performance Comparison

VMWARE VSPHERE 5 KEY BENEFITS

The QLogic 2500 Series 8Gb Fibre Channel Adapters offer up to 33 percent higher IOPS and up to 33 percent higher throughput compared to the Emulex LightPulse 12000 Series Adapter.

- Highest levels of VM density
- Perform VM migrations in the shortest time

QLogic’s customers achieve:

- Better server utilization
- Reduced operating expenses



Follow us:

Corporate Headquarters Cavium, Inc. 2315 N. First Street San Jose, CA 95131 408-943-7100

International Offices UK | Ireland | Germany | France | India | Japan | China | Hong Kong | Singapore | Taiwan

Copyright © 2013 - 2017 Cavium, Inc. All rights reserved worldwide. QLogic Corporation is a wholly owned subsidiary of Cavium, Inc. QLogic, the QLogic logo, and QConvergeConsole are registered trademarks or trademarks of Cavium, Inc. All other brand and product names are registered trademarks or trademarks of their respective owners.

This document is provided for informational purposes only and may contain errors. Cavium reserves the right, without notice, to make changes to this document or in product design or specifications. Cavium disclaims any warranty of any kind, expressed or implied, and does not guarantee that any results or performance described in the document will be achieved by you. All statements regarding Cavium’s future direction and intent are subject to change or withdrawal without notice and represent goals and objectives only.