

Open Industry Consortium to Bring 25 and 50 Gigabit Ethernet to Cloud-Scale Networks

7/1/2014

Arista Networks, Broadcom, Google, Mellanox and Microsoft Collaborate on New Ethernet Specification to Drive Greater Performance and Cost Efficiency for Next Generation Data Centers

SANTA CLARA, Calif. -- July 1, 2014 -- A consortium of companies including Arista Networks (NYSE: ANET), Broadcom Corporation (NASDAQ: BRCM), Google Inc. (NASDAQ: GOOG, GOOGL), Mellanox Technologies, Ltd. (NASDAQ: MLNX), and Microsoft Corp. (NASDAQ: MSFT) today announced the availability of a specification optimized to allow data center networks to run over a 25 or 50 Gigabit per second (Gbps) Ethernet link protocol. This new specification will enable the cost-efficient scaling of network bandwidth delivered to server and storage endpoints in next-generation cloud infrastructure, where workloads are expected to surpass the capacity of 10 or 40 Gbps Ethernet links deployed today.

The 25 Gigabit Ethernet Consortium was formed by the above leading cloud networking technology providers for the purpose of supporting an industry-standard, interoperable Ethernet specification that boosts the performance and slashes the interconnect cost per Gbps between the server Network Interface Controller (NIC) and Top-of-Rack (ToR) switch. The specification adopted by the Consortium prescribes a single-lane 25 Gbps Ethernet and dual-lane 50 Gbps Ethernet link protocol, enabling up to 2.5X higher performance per physical lane or twinax copper wire between the rack endpoint and switch compared to current 10 Gbps and 40 Gbps Ethernet links. The new specification is being made available royalty-free by the Consortium members to any data center ecosystem vendor or consumer who joins the Consortium.

"The companies joining the 25 Gigabit Ethernet Consortium are taking a major step forward in increasing the performance of data center networks," said Anshul Sadana, Senior Vice President, Customer Engineering, Arista Networks. "With ever-increasing server performance and with the uplinks from the leaf to the spine layer migrating

to 100 Gbps in the near future, it makes sense to increase the access speed from 10 Gbps to 25 and 50 Gbps.”

By deploying 25 and 50 Gbps Ethernet in their networks, builders of mega-scale data centers such as Microsoft expect to achieve operational advantages, including reduced CapEx and OpEx. “The new Ethernet speeds proposed by the Consortium give superior flexibility in matching future workloads with network equipment and cabling, with the option to ‘scale-as-you-go,’” said Yousef Khalidi, Distinguished Engineer, Microsoft. “In essence, the specification published by the 25 Gigabit Ethernet Consortium maximizes the radix and bandwidth flexibility of the data center network while leveraging many of the same fundamental technologies and behaviors already defined by the IEEE 802.3 standard.”

The companies’ motivation for founding the Consortium is to immediately set an industry standard definition of the 25 Gbps and 50 Gbps Ethernet physical layer (PHY) and media access control layer (MAC) behavior, including virtual lane alignment, autonegotiation, and forward error correction characteristics, to enable the swift rollout of 25 Gbps and 50 Gbps Ethernet compliant implementations over the next 12 to 18 months through the participation of multiple semiconductor, networking equipment and interconnect vendors in the Consortium.

Open Consortium and Specification

The 25 Gigabit Ethernet Consortium is open to membership from any ecosystem company or organization. To become a member of the 25 Gigabit Ethernet Consortium, visit <http://www.25GEthernet.org>.

Additional Quotes

“Broadcom has long been a strong proponent and contributor of new Ethernet standards that have served the advancement of data center and cloud-scale networks,” said Rochan Sankar, Product Marketing Director, Infrastructure and Networking Group, Broadcom. “We believe that 25 and 50 Gigabit Ethernet (GbE) serves a focused market requirement for next-generation, performance and cost optimized server- and storage-to-switch interconnects and are proud to be a key contributor to the Consortium’s 25 and 50 GbE specification.”

“The growth in data creation and usage mandates faster and more efficient interconnect technologies,” said Michael Kagan, Chief Technology Officer, Mellanox Technologies. “Mellanox provides a wide variety of interconnect solutions ranging from 10 to 100 Gbps, and endorses open industry collaboration to enable further interconnect flexibility and speeds.”

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