Broadcom Ships Trident 4C, Industry's Highest Performance Security Switch

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12.8 Tb/s Flow Anomaly Detection, No-Compromise Network Security, Connected by Broadcom

SAN JOSE, Calif., Sept. 06, 2022 (GLOBE NEWSWIRE) -- Broadcom Inc. (NASDAQ:AVGO) announced today delivery of the Trident 4C Ethernet switch ASIC, a 12.8 terabits/second security switch capable of analyzing all traffic at line rate. Trident 4C detects flow anomalies in real time as part of a rapid cyber-threat defense.

Network bandwidth has been increasing rapidly and security analytics until now have been forced to rely on statistical sampling. Typically one random packet out of a thousand is analyzed, while the remaining 99.9 percent pass through unchecked.

Trident 4C eliminates the need to compromise between performance and security. Random sampling is replaced by inspection of 100 percent of the traffic, even at the extreme bandwidths found in network cores. Trident 4C integrates a revolutionary, purpose-built analytics engine capable of 170 billion operations per second with the ability to detect suspicious flow anomalies at line rate. This engine, enabled by default, has no impact on switch operation or performance.

"Sampling-based approaches to security are inherently flawed. We decided to eliminate the tradeoff between security and performance," said Ram Velaga, senior vice president and general manager, Core Switching Group, Broadcom. "Trident 4C is a natural extension of our innovative portfolio. We started with Layer-2 switching, progressed to Layer-3 routing, and now are adding Layer 4-7 security as we climb the network OSI stack."

"Over the past couple of years my team of researchers have collaborated with Broadcom on applying these groundbreaking real-time connection monitoring capabilities to develop a new generation of network security solutions," says Reza Rejaie, professor of Computer and Information Science, University of Oregon, and director of the Oregon Network Research Group. "This is a very active and important area of research to strengthen cybersecurity. Now with the introduction of the higher-capacity Trident 4C we look forward to applying these innovations at scale in the core of the network."

"Arista's 7050X4 series is powered by the Broadcom Trident 4 chipsets offering systems that today scale to 32 ports of 400G," says Martin Hull, vice president, Platform Product Management and Cloud, Arista Networks. "We are excited that the Trident 4C couples higher port counts with stronger security for next generation networks."

"Our enterprise and service provider customers demand a high degree of flexibility from their core switches, particularly as they continue to expand and upgrade their networks," said Dan DeBacker, senior vice president, Products, Extreme Networks. "Trident 4C brings advanced security and more flexibility when it comes to port connectivity, expandability, and in-field features upgradability, which will make it easier and more cost effective to continue to evolve their networks as needed."

Trident 4C key benefits

- Connection-aware monitoring of 500k+ active flows at 5.4 billion packets/second
- 170 billion ALU operations per second for advanced connection fingerprinting
- 4M state flow metrics counters set by a programmable arithmetic engine
- 1M exact-match policy ACLs
- Suitable for fixed-configuration and chassis-based designs
- SONiC and SAI readiness for rapid integration into high-capacity networks

Availability

Broadcom is now shipping Trident 4C/ BCM56890 devices to qualified customers. For more information on the Broadcom Trident 4C Ethernet switch please click here.

About Broadcom

Broadcom Inc. (NASDAQ: AVGO), a Delaware corporation headquartered in San Jose, CA, 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 https://www.broadcom.com.

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