



## Broadcom Modernizes Fibre Channel with New NVMe Storage and SAN Automation Technology

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### Complements new high density platforms to increase scalability, drive storage innovation, and simplify operations

SAN JOSE, Calif., April 10, 2018 (GLOBE NEWSWIRE) -- Broadcom Inc. (NASDAQ:AVGO), today announced new NVMe and automation capabilities and the industry's highest-density Brocade® Gen 6 switch and port blade, the [Brocade G630 switch](#) and [Brocade FC32-64 port blade](#) for the Brocade X6 director. These new Gen 6 Fibre Channel platforms are purpose-built for flash storage to accelerate business operations, respond to dynamic demands, and eliminate complexity.

The all-flash data center is here and the next wave of storage innovation is rapidly approaching. Next-generation NVMe storage will dramatically accelerate flash, however it will expose infrastructure limitations. The network will become the new bottleneck and enterprises need to re-evaluate their existing SANs. Brocade Gen 6 Fibre Channel is purpose-built to handle the low-latency and monitoring requirements for NVMe storage. New software optimization reduces latency by nearly 15% for Gen 6 platforms and enhanced integrated network sensors provide new insight into network health and performance of NVMe traffic.

The rapid pace of innovation in the data center is increasing the complexity of managing the infrastructure. More time is spent on deployment, configuration, and troubleshooting tasks to maintain service-level agreements and keep up with demands. Brocade automation is powerful for DevOps, simple with Ansible, and open for communities. It leverages open-source technology to automate and orchestrate repetitive tasks, enable IT organizations to significantly improve their efficiency, and decrease the risk of operational mistakes.

"Brocade is modernizing Fibre Channel and developing innovative capabilities to enable our customers to take advantage of disruptive storage technology like NVMe and automation," said Jack Rondoni, senior vice president and general manager, Brocade Storage Networking division at Broadcom. "The all-flash data center is a reality today and NVMe storage is rapidly approaching. Our focus is to innovate and develop industry-leading products and technologies that simplify storage networking and adapt to the evolving IT landscape."

"As datacenters transition to the latest NVMe-based flash technologies, storage network infrastructure upgrades will be required to maintain scalability growth," said Eric Burgener, research vice president in Storage at IDC. "High density Gen 6 Fibre Channel technology like Broadcom's new family of Brocade blade, switch and director products provide that simple growth path for the large installed base of enterprise-class storage networking."

With more than 20 years of storage networking experience, Broadcom understands the nuances that go into infrastructure management and what tasks can benefit from Brocade automation. By introducing REST APIs directly into Brocade switch and management products, Broadcom offers a broad range of choices to enable any SAN management solution. IT organizations that couple robust data collecting capabilities with Brocade automation and orchestration tools (such as Ansible) gain the ability to automate configuration tasks and the visibility to monitor and detect any performance or health changes.

Brocade automation solutions are based on these pillars:

- REST APIs available directly from the switch automates repetitive daily tasks, such as fabric inventory, provisioning, and operational state monitoring
- Open source PyFOS, a Python scripting language simplifies common SAN management practices
- Ansible integration enables automation and orchestration across the entire infrastructure

"When attempting to keep pace with today's IT challenges, simply increasing budgets is a losing scenario. This is a major reason why, according to our research, automation and orchestration initiatives have become one of the top data center modernization priorities," says Scott Sinclair, senior analyst at ESG. "Leveraging automation is critical for modern IT and Broadcom is delivering automation across the Fibre Channel network as well as enabling orchestration across the entire infrastructure with tools like Ansible."

The Brocade Gen 6 product family now includes the Brocade G630 switch and the Brocade FC32-64 blade. The Brocade G630 is the industry's highest density fixed-port switch, supporting up to 128 ports in a 2U form factor. The FC32-64 is the industry's highest port density blade that includes 64 32 Gbps ports and scales the Brocade X6 Director up to 512 ports. These scalable, high-density solutions are designed for the all-flash data center to support growth for demanding workloads and data center consolidation.

The high-density switch and blade extends IO Insight advanced monitoring for NVMe over Fibre Channel. IO Insight leverages integrated sensors to provide deep visibility into the IO performance of both SCSI and NVMe flash storage to gain unparalleled insight into potential issues and help maintain service levels. This enhanced visibility enables quick identification of degraded application performance at host and storage tiers reducing time to resolution.

### Industry Support for Gen 6 Fibre Channel

"The reliability, scalability and performance of Fibre Channel makes it the most prevalent fabric for flash storage today. And as enterprise datacenters continue adopting flash storage, NVMe will be the next wave of flash technology that will deliver even lower latency. The Brocade NVMe-ready solutions with Fabric Vision capabilities, combined with QLogic's Gen 6 FC-NVMe supported adapters with StorFusion™ features, enable end-to-end traffic monitoring and QoS to drive performance efficiencies needed to power this evolution."

— Vikram Karvat, Vice President and General Manager, Fibre Channel Storage Group, Cavium

"The Emulex Connectivity Division is excited to support these new innovations focused on increasing the performance and manageability of enterprise storage networking. Combining the new capabilities in the Brocade switches with our family of Emulex Gen 6 Fibre Channel HBAs will offer customers a solution that delivers the low latency and high bandwidth required for modern data centers."

- Jeff Hoogenboom, Vice President and General Manager, Emulex Connectivity Division, Broadcom

"As we accelerate digital transformation projects for customers with ETERNUS all-flash storage, it's important to make sure that entire infrastructures have the end-to-end data throughput capacity. That's why we are partnering with Broadcom to offer the full Gen 6 Fibre Channel networking, including the new Brocade G630 switch. This provides the high performance needed for NVMe-ready infrastructures and means that customers can accelerate their transformation without being stuck in the slow lane."

- Olivier Delachapelle, Head of Category Management, Data Center Products, Fujitsu EMEA

"Every day the systems and software that power business become more closely aligned. It is imperative that each part of the data path be properly configured or data efficiency, availability and response times suffer. To ensure that customers are happy and IT teams get the return on investments they expect, automation is becoming increasingly important. Using the Brocade G630 with the Hitachi Virtual Storage Platform (VSP) F series and G series and Hitachi Automation Director (HAD), organizations can orchestrate delivery of the systems and software that power their business. Combined, they enable IT leaders to deliver a worry-free infrastructure and predictable customer experience."

- Bob Madaio, Vice President, Infrastructure Solutions Marketing of Hitachi Vantara

"In today's frenetic and dynamic technology landscape, people and systems must be adaptable and able to deliver more with less. To this end, HPE and Broadcom have worked together for nearly 2 decades to deliver reliable, simple, and efficient data center solutions to our joint customers. Today's announcements around higher-density, NVMe-ready, automation-optimized Gen 6 Fibre Channel solutions are another proof point that underscores our joint commitment to helping customers derive maximum benefit from their technology investments."

- Marty Lans, HPE GM Storage Infrastructure and Connectivity

"Broadcom's NVMe-ready, new high-density Fibre Channel SAN solutions with advanced automation capabilities are key for today's modern data center. They perfectly complement the performance of Huawei's All-Flash Storage System and intelligent storage management for mission critical enterprise businesses. The new enhanced capabilities will meet the dynamic demands and help increase innovation and productivity of our customers."

- Meng Guangbin, President of Huawei Storage Product Line, Huawei Technologies Co., Ltd.

"Broadcom's announcement of automation capabilities and integration with Ansible means organizations which implement Infinidat's data storage systems with Brocade storage networks empower their DevOps teams to simplify their organization's operations and increase productivity by incorporating their storage infrastructure into their automation strategy. Having the right network augments the benefits of the scalability and efficiency of our storage systems, and this announcement further defines Broadcom as the correct network choice with Infinidat's petabyte-scale data storage systems."

- Bob Cancellia, EVP of Business Development and Alliances, Infinidat

"Intelligent storage and networks are driving the world to evolve. Inspur's new intelligent storage G2 and Broadcom's Gen 6 Fibre Channel solutions can meet the most critical enterprise needs to optimize IT performance and reduce complexity. Using Brocade's new automation capabilities in conjunction with Inspur's intelligent storage platform can help make the Enterprise digital transformation come true."

- Sun Gang, General Manager of Inspur Storage Product Department, Inspur Electronic Information Industry, Co., Ltd.

"The all-flash autonomous datacenter requires datacenter automation, orchestration and assured data access to enable organizations to stay focused on scaling their core business. Broadcom's Fibre Channel products are the optimal network infrastructure for all-flash datacenters, and today's announcement of new high-density Gen 6 Fibre Channel products, automation technology, and enhanced NVMe capabilities provides organizations which partner with Kaminario and Broadcom an agile and scalable infrastructure with the performance of all-flash to power their mission critical applications."

- Eyal David, CTO, Kaminario

"Through our continued collaboration with Broadcom, NetApp is committed to delivering modern SAN solutions that give customers the most efficient access, management, and utilization of critical data. Combining NetApp's enterprise-class flash storage with the newly expanded Brocade Gen 6 Fibre Channel portfolio enables customers to build the most scalable modern SAN solutions that truly capitalize on innovation in NVMe over Fibre Channel."

- Octavian Tanase, Senior Vice President, ONTAP Software and Solutions Group at NetApp

"Broadcom's new automation capabilities, high-density Gen 6 Fibre Channel products, and enhancements to NVMe over Fibre Channel provide our joint customers a modern, user-friendly infrastructure with incredible performance. Our joint customers can be confident they have implemented a solution optimized for the needs of their data centers today and tomorrow."

- Rajeev Rajavasireddy, Vice President of Product Management and Solutions, Pure Storage

"Our partnership with Broadcom and today's announcements of high-density, Gen 6 Fibre Channel products expands Vexata's ability to provide enterprises with unparalleled performance at scale for business critical data, analytics and machine learning platforms. Brocade storage networking empowers enterprises to unlock the maximum performance from Vexata's all-flash storage, simplifies operations with automation, and provides a path to the next generation storage protocol of NVMe."

- Charlie Leeming, Chief Sales Officer of Vexata

#### **Availability**

The Brocade G630 switch, FC32-64 blade for the Brocade X6 director, and new NVMe and automation capabilities are available now through Broadcom today. Broadcom OEM partners plan to start shipping the new switch and blade today and throughout the next several quarters.

Visit [www.broadcom.com/brocade](http://www.broadcom.com/brocade) to learn more about Brocade Fibre Channel networking solutions.

#### **About Broadcom**

Broadcom Inc. (NASDAQ:AVGO) is a leading designer, developer and global supplier of a broad range of digital and analog semiconductor connectivity solutions. Broadcom Inc.'s extensive product portfolio serves four primary end markets: wired infrastructure, wireless communications, enterprise storage and industrial & other. Applications for our products in these end markets include: data center networking, home connectivity, set-top box, broadband access, telecommunications equipment, smartphones and base stations, data center servers and storage, factory automation, power generation and alternative energy systems, and electronic displays. For more information, go to [www.broadcom.com](http://www.broadcom.com).

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