



# Gen 7 Assets

September 2020



# Storage Fabrics Technology Page Resigned

https://www.broadcom.com/solutions/data-center/storage-fabrics-technology

Old way, lots of words and was very hard for customers to find our content

New way, all content built into categories making it easy for customers to find content

## Storage Fabrics Technology

Fibre Channel fabrics are the most trusted and widely deployed purpose-built network infrastructure for storage. They are the universal thread that connects businesses to their most critical applications and data, and as such play a vital role in the world's economies. In fact, Fibre Channel has been an integral part of every wave of storage advancement in the data center. And throughout that evolution, Brocade has helped customers deliver more value from their applications and infrastructure by driving Fibre Channel innovation.

One of the most exciting storage advancements today is SSD based flash storage. The unprecedented speed and cost-effectiveness of flash storage is dramatically accelerating data center transformation. As companies reexamine application performance with flash technology, they require fabrics that deliver consistently high capacity, bandwidth and reliability. Today, 70 to 80 percent of flash array storage systems are deployed with Fibre Channel. Gen 8 32 Gbps Fibre Channel technology is purpose-built for next-generation NVMe flash storage, delivering seamless integration in the datacenter.

The rapid pace of innovation in the data center is increasing the complexity of managing the infrastructure. More time is spent on equipment configuration and troubleshooting tasks to maintain service-level agreements and keep up with demands. IT organizations spend nearly half of their time performing repetitive daily management tasks, such as zoning, inventory reporting, and operational validation checks. In order for IT organizations to modernize their data center quickly, they must be able to simplify operations and free up resources to focus on business optimization and revenue opportunities. With Brocade automation, organizations can reliably perform resource-intensive tasks, such as provisioning and operationalize the continuous monitoring of the network, so that tasks can be completed in a fraction of the time, while eliminating human error.

### Brocade Fibre Channel Technology

As companies move to digital and adopt to new hardware, they need a modern storage network that supports business agility and the increasing value of machine data. Brocade Fibre Channel delivers the non-stop availability and exceptional performance required for tomorrow's all-flash data centers. Brocade Fibre Channel products deliver the performance, reliability, and security requirements of hyperscale virtualization, new data center architectures, and next-generation storage technologies.

Brocade and its partner ecosystem offer a growing portfolio of Fibre Channel products that are already redefining enterprise storage, including Brocade XE Directors, Brocade 9830 Switch, Brocade 9820 Switch, Brocade 9810 Switch and Brocade 8100 Extension Base. The Brocade Gen 8 Fibre Channel portfolio combines innovative hardware and Brocade Fabric Vision technology, which features auto-discovering, intelligent monitoring for storage I/O performance and VM insight for unparalleled visibility into the performance of individual VMs. Brocade is leading partnerships at all levels of the ecosystem to drive results in storage networking innovations.

Together, these offerings provide the industry's highest level of network visibility and performance. Leading-edge innovations in Brocade Fibre Channel drive the industry's highest standards in operations agility, while redefining application performance for hyperscale, mission-critical storage.



What about software-defined and cloud-based technologies that are also positioned to reinvent storage? These innovative technologies clearly have a role in the data center. Brocade Fibre Channel complements them all by providing the unmatched reliability, performance, scalability, and security needed to deliver always-on business operations. For more than 20 years, Fibre Channel has proven to be the only infrastructure that can deliver these capabilities.

### Brocade Fibre Channel Innovations

An extension of Brocade's Fibre Channel technology, Brocade Fabric Vision increases visibility into the network and supports highly automated management functions. These functions dramatically reduce operational costs by simplifying management, so you can preempt potential problems and accelerate application deployments. Fabric Vision combines capabilities from Brocade's hardware and Brocade Fabric OS. The newly updated Brocade Fabric OS management software automates tasks with an integrated dashboard that displays a view of the overall SAN health. With IO insight, Fabric Vision technology provides organizations with open dashboard visibility into the performance of their environment. This automated visibility reduces time-to-troubleshoot by enabling rapid identification of specific application performance at the host and storage tiers. VM insight seamlessly monitors Virtual Machine (VM) performance throughout a storage fabric with auto-discovered, end-to-end VM tagging. VM insight allows administrators to quickly determine the source of VM and application performance anomalies to provision and tune the infrastructure.

Automation — Gen 8 Fibre Channel's automation technology transforms SAN management by simplifying operations and freeing up resources, allowing organizations to focus on business optimization and revenue opportunities. This technology enables DevOps resources to quickly automate and orchestrate SAN resources through open APIs and the Ansible automation engine. IT organizations that combine Brocade's automation with automation tools such as Ansible gain the ability to automate configuration tasks and to monitor and detect any performance or health changes. In turn, these automation tools dramatically increase the amount of infrastructure that any single administrator can manage, thus freeing up resources for high-value tasks.

Extension — Brocade purpose-built extension solutions help you address the growing resiliency and backup needs driven by increasing traffic between data centers, virtualized application workloads, and business continuity requirements. Our solutions maximize resiliency and backup throughput over distance, using data compression, dedup and tape robotic acceleration, and WAN-optimized TDP. Brocade Extension solutions include the Brocade 7800 Extension Switch, the Brocade 7800 Extension Switch, Brocade 8100 Extension Base and the Brocade 8100 Extension Base for the Brocade 8100.

Mainframe — Brocade FICON-qualified directors and switches provide flexible FICON infrastructures for designing, building and transforming enterprise data centers into strategic business assets. Brocade Gen 8 Fibre Channel DCX, 8100 FICON directors and Brocade 8810, 7840, and 7800 FICON switches with Brocade Fabric Vision technology provide industry-leading performance, scalability, and investment protection, so you can leverage the full capabilities of your IBM z

### REQUEST INFO

- Planning for the Transition to Production-Ready NVMe over Fabric Deployments in the Enterprise
- 5 Things a Fibre Channel SAN Fabric Can Do for You
- Networking Next-Gen Storage for Dummies Book
- Unleash the Power of NVMe with Fibre Channel
- 5 Reasons You Must Automate Your SAN Environment—Today
- NVMe over Fibre Channel for Dummies, 3rd Edition
- SAN Automation for Dummies
- Automating the Fibre Channel Data Center
- Why NVMe Over Fibre Channel
- NVMe over Fabric: It's the Future of Flash, but you need to choose for it today. (By Jon Tozzi)
- When You Automate With Brocade, You Accelerate EVERYTHING
- Benefits of Gen 8 Fibre Channel for the All-Flash Data Center
- Network Storage Needs Insight for Application Performance
- Maintains the All-Flash Data Center with Brocade Gen 8 Fibre Channel White Paper
- Brocade The Modernization of Storage Architectures White Paper
- Realities of Hyperconvergence
- The Realities of Hyperconvergence in the Enterprise Datacenter
- ESG Storage Architecture Considerations: SAN and HCI.pdf
- Storage Historically Power Your Business Applications
- Storage Systems Protocols: The Reality of Fibre Channel
- ESG: The Silent Threat of Configuration Drift
- How Gen 8 Unleashes Flash and NVMe for the Modern Data Center (The Dube)
- Visibility That Pays Off: How the Best-in-Class Use Adaptive Analytics to Boost Their Infrastructure Performance
- Flash Arrays Demand High Performance Networks
- Hyper Scale Virtualization Challenges Storage Network Performance

### Products for Storage Fabrics Technology

- Fibre Channel Networking
- Brocade Fibre Channel delivers the non-stop availability and exceptional performance required for tomorrow's all-flash data centers. The Brocade Fibre Channel directors and switches deliver the performance, reliability and security requirements of hyperscale virtualization, the all-flash data center, and next-generation storage technologies.

SHOW PRODUCTS



Storage Fabrics Technology

Fibre Channel

5 Things a Fibre Channel SAN Fabric Can Do for You



Gen 7

Gen 7 Fibre Channel Enables the Autonomous SAN



Modernize

NVMe

Automation

Storage Modernization



# Sept 1, 2020 Broadcom Release Gen 7 Press Release

- **Broadcom Unveils Industry's First Gen 7 64Gb/s Fibre Channel Switching Platforms Enabling an Autonomous SAN**
  - **Press Release:**  
<https://www.broadcom.com/company/news/product-releases/53756>

## Product News

### NEWS

Product News Releases  
Financial News Releases

### Broadcom Unveils Industry's First Gen 7 64Gb/s Fibre Channel Switching Platforms Enabling an Autonomous SAN

New End-to-End 64Gb/s Storage Solutions Boast Industry-Leading Switches, Adapters, and Transceivers

SAN JOSE, Calif., Sept. 01, 2020 (GLOBE NEWSWIRE) -- **Broadcom Inc. (NASDAQ: AVGO)** today announced the availability of the industry's first Gen 7 64Gb/s Fibre Channel switching platforms—the Brocade X7 Directors and G720 Switch, that are foundational infrastructure for the on-demand data center. Additionally, the company today announced the industry's first 64Gb/s Fibre Channel optical transceiver, that is being qualified for use in Brocade switches and Emulex adapters, for end-to-end Gen 7 performance.

Brocade Gen 7 Fibre Channel combines unmatched performance, powerful analytics and advanced automation capabilities to enable an autonomous SAN. New 64Gb/s speed and 50 percent lower latency, powers the network for storage innovations like NVMe flash arrays. Gen 7 also adds new self-learning, self-optimizing and self-healing capabilities to automate SAN management. With the launch of Gen 7 Fibre Channel switching platforms, Broadcom is demonstrating its commitment to develop innovative Fibre Channel technology for the most trusted network for storage.

"Broadcom continues to lead the market and drive innovation with the launch of the industry's first end-to-end Gen 7 Fibre Channel portfolio," said Jack Rondoni, senior vice president and general manager, Brocade Storage Networking division, Broadcom. "Brocade Gen 7 harnesses the power of 64Gb/s switching technology and transforms current storage networks with autonomous SAN capabilities, simplifying management, and significantly reducing operational costs."

Technology is evolving at an incredible pace and businesses are demanding more from their IT resources and infrastructure. With the rapid adoption of flash storage and the ramp up of NVMe-based storage, organizations will move more data through a SAN than ever before. This requires a network capable of unleashing performance and maximizing ROI for storage investments. Brocade Gen 7 performance is powered by 64Gb/s line-rate speed along with a 50 percent reduction in latency. This ensures that the network will never be the bottleneck for current and future storage technologies.

Brocade Gen 7 today also introduces a range of autonomous technologies to simplify and automate management. A self-learning SAN leverages comprehensive data collection with powerful analytics to quickly understand the impact of current or trending problems. The self-optimizing capability utilizes actionable intelligence to automate network management and maximize performance. Learning traffic behavior enables the network to make smarter decisions on traffic prioritization, congestion management and notification to ensure optimal network performance for applications and storage.

A self-healing SAN raises the bar for network availability through automatic avoidance and recovery features. When potential disruptions or outages are detected, the network will automatically mitigate or resolve issues without intervention. These new autonomous technologies will greatly simplify SAN management and enable unparalleled network performance and reliability.

With almost three decades in the data center, Fibre Channel continues to be an essential piece of most enterprises' critical storage infrastructure due to its industry-leading reliability and long-lasting investment protection. With a foundation of six-nines availability and multi-generational compatibility, Fibre Channel continues to add new capabilities and value to address the evolving needs of storage customers.

"The enterprise storage industry is already well down the migration path to NVMe-based storage systems, and by 2021 over 50 percent of enterprise storage revenues driven by latency-sensitive primary workloads will come from the sale of these types of systems," said Eric Burgener, research vice president, Infrastructure Systems, Platforms and Technologies Group, IDC. "To get the full performance benefits of NVMe in these systems requires NVMe over FC host connections, and more and more enterprises will be installing these types of extremely low latency networks as they deploy the next-generation applications needed in the digital era. NVMe over FC is the most efficient network transport protocol for these high performance networks, already broadly deployed in commercial environments today, and Gen 7 technology will enable the performance at scale these workloads demand."

# Brocade X7 Directors

- [New Brocade X7 Director page](#)
- Assets available:
  - [Brocade X7 Product Brief](#)
  - [Brocade Gen 7 Fibre Channel ESG Showcase Paper](#)
  - [Brocade Autonomous SAN ESG Showcase Paper](#)
  - [The Autonomous SAN Solution Brief](#)
  - [Brocade Gen 7 Enables an Autonomous SAN Video](#)
  - [Brocade Autonomous SAN Video](#)

## Brocade X7 Directors

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A faster, more intelligent, more resilient foundation for the on-demand data center

[OVERVIEW](#) [SPECIFICATIONS](#) [DOCUMENTATION](#) [OPTIONAL PRODUCTS](#)



Meet ever-increasing demands for quicker, more reliable data access with the Brocade X7 Director family. With ultra-low latency and 64 Gb/s links, these directors provide the highest level of performance needed for next-generation data centers. Combined with autonomous SAN technology, Brocade X7 Directors harness the power of analytics and the simplicity of automation to optimize performance, ensure reliability and simplify management. Leveraging these capabilities enables organizations to realize a self-learning, self-optimizing, and self-healing SAN, making the Brocade X7 Director a highly efficient and resilient solution.

Faster	Scalable	Intelligent	Resilient
			
Maximize NVMe and high-transaction workloads with 50% lower latency compared to Gen 6	Scale more devices, applications and workloads with double the performance through 64Gb/s links	Transform data into actionable insights to optimize performance and ensure reliability with built-in analytics	Automate actions to simplify management and resolve issues without intervention with automation

[\[PDF\] Brocade X7 Director Product Brief](#)

### Features

Modernize the SAN to meet the requirements of an on-demand data center

- Maximize NVMe and high-transaction workloads with 50 percent lower latency
- Scale more devices, applications and workloads with 64 Gb/s links
- Increase visibility and simplify operations with a modern SAN management tool
- Eliminate third party tools with integrated analytics

Transform telemetry data into actionable insights to optimize performance and ensure reliability

- Collect and transform millions of data points into actionable intelligence
- Visualize application and device-based performance and health metrics
- Detect abnormal traffic behaviors and degraded performance
- Simplify troubleshooting by identifying and isolating issues

Automate actions to simplify management and resolve issues without intervention

- Instantly notify end-devices of congestion for automatic resolution
- Guarantee application performance by proactively monitoring and load balancing traffic
- Ensure data delivery with automatic failover from physical or congestion issues
- Reduce human error and streamline processes by automating repetitive daily tasks through open DevOps automation technology

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- [New Brocade G720 Switch page](#)
- Assets available:
  - [Brocade G720 Product Brief](#)
  - [Brocade Gen 7 Fibre Channel ESG Showcase Paper](#)
  - [Brocade Autonomous SAN ESG Showcase Paper](#)
  - [The Autonomous SAN Solution Brief](#)
  - [Brocade Gen 7 Enables an Autonomous SAN Video](#)
  - [Brocade Autonomous SAN Video](#)

## Brocade G720 Switch

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Maximize performance and simplify daily tasks with a building-block switch

[OVERVIEW](#)
[SPECIFICATIONS](#)
[DOCUMENTATION](#)
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Leverage the benefits of automation and high performance with the Brocade G720 Switch. Delivering unmatched 64Gb/s performance and industry-leading port density, this Gen 7 Fibre Channel switch delivers a building block that supports data growth, demanding workloads, and data-center consolidation. With a 50 percent latency reduction compared to the previous generation, this powerful switch enables the maximum performance for NVMe storage and high-transaction workloads.

**Breakthrough Performance**



Maximize performance of NVMe storage with 64Gb/s links and 50% lower latency

**Simplified Management**



Simplify SAN deployment and management with easy-to-use tools

**Powerful Analytics**



Optimize performance and reliability with built-in visibility and analytics

**Advanced Automation**



Automate repetitive tasks and resolve issues without intervention

 [\[PDF\] Brocade G720 Switch Product Brief](#)

**Features**

Modernize the SAN for critical workloads and new storage technologies

- Accelerate critical workloads with 64Gb/s links
- Maximize performance of NVMe storage with 50 percent lower switching latency than Gen 6
- Easily migrate to NVMe storage with proven infrastructure
- Increase visibility and simplify operations with an easy-to-use modern SAN management tool

Optimize performance and eliminate disruptions with built-in visibility and analytics

- Collect comprehensive telemetry data across the fabric to enable powerful analytics
- Visualize the data to easily understand the health and performance of the SAN
- Detect issues and provide actionable insights to avoid problems
- Simplify troubleshooting by identifying and isolating issues

Simplify deployment, configuration, and management of SAN resources

- Reduce number of steps to deploy and configure a switch with EZSwitchSetup
- Identify and eliminate congestion with self-healing tools
- Automate repetitive tasks to save time and eliminate human error
- Automate troubleshooting and mitigate disruptions with limited expertise

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# List of Assets

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- [New Brocade X7 Director page](#)
- [New Brocade G720 Switch page](#)
- [Updated FOS page](#)
- [SANnav Management Portal page](#)
- [Brocade X7 Product Brief](#)
- [Brocade G720 Product Brief](#)
- [Brocade Gen 7 Fibre Channel ESG Showcase Paper](#)
- [Brocade Autonomous SAN ESG Showcase Paper](#)
- [The Autonomous SAN Solution Brief](#)
- [Brocade Gen 7 Enables an Autonomous SAN Video](#)
- [Brocade Autonomous SAN Video](#)
- [Brocade Fabric OS Product Brief](#)
- [Brocade SANnav Management Portal and Global View Product Brief](#)
- [Brocade Fabric Vision Technology Product Brief](#)

Gen 7

## Harness the Power of Next-Gen Storage technology with Brocade Gen 7 Capabilities

The SAN needs to evolve to keep pace with innovations and modern day demands. It needs to be capable of unleashing performance and maximizing ROI of investments. Brocade Gen 7 Fibre Channel combines unmatched performance, powerful analytics and advanced automation capabilities to deliver a faster, more efficient, and more resilient autonomous SAN.

### Gen 7 Fibre Channel Enables the Autonomous SAN

Brocade Gen 7 Fibre Channel combines performance, analytics and automation capabilities to enable a faster, more intelligent, and more resilient network. With ultra-low latency and 64Gb/s links, Gen 7 provides the highest level of performance for NVMe workloads, eliminating I/O bottlenecks and unleashing the full performance of next-generation storage. Through self-learning, self-optimizing and self-healing capability, organizations will realize an autonomous SAN that will greatly simplify SAN management and enable unparalleled network performance and reliability. ESG Gen 7 paper reveals how Gen 7 next-level performance and integrated intelligence delivers the accelerated foundation for modern data centers. ESG Autonomous SAN paper showcases the impressive step forward in technology that helps IT understand and optimize their data centers without human intervention.

[ESG Gen 7 Paper](#)

[ESG Autonomous SAN Paper](#)

# Brocade Gen 7 Classes

Pre-sales open to internal and OEMs, hardware and software open to external

## Pre-sales

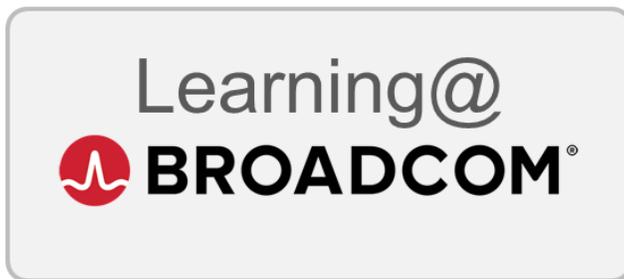
- Pre-Sales Training – Introduction to Brocade Gen 7 Fibre Channel
- Pre-Sales Training - Brocade Analytics

## Hardware

- Introduction to Brocade Gen 7 Director Hardware (HWG7D-120)
- Introduction to Brocade Gen 7 Switch Hardware (HWG7S-120)
- Gen 7 Switch and Director Product Update Training (PUT-234)

## Software

- Fabric OS V9.0 Product Update (PUT-235)
- SANnav v2.1.0 Product Update (PUT-236)
- SANnav v2.1.0 Management Portal Inventory (MPIV-220)
- SANnav v2.1.0 Management Portal Event Management (MPEV-220)
- SANnav v2.1.0 Management Portal User Accounts (MPUA-220)
- SANnav v2.1.0 Global View Overview (GVOV-220)



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