BROCADE
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FAQ

Brocade® G610/G620/G630 Switches

Frequently Asked Questions

Overview

Brocade, a Broadcom company, provides the industry's leading Gen 6 Fibre Channel family of Storage Area Network (SAN) switches, including Brocade® G610, G620, and G630 Switches. These high-performance, highly reliable Fibre Channel switches address a wide range of business requirements, from small shared-storage environments up to the most demanding enterprise data centers.

For product information, visit: www.broadcom.com/products/fibre-channel-networking/switches.

General Questions and Answers

What is Gen 6?

Brocade Gen 6 Fibre Channel is the purpose-built network infrastructure for mission-critical storage, delivering operational stability, NVMe-ready performance, and increased business productivity with advanced automation and orchestration to speed up data access and drive always-on business operations. Brocade switches with Gen 6 Fibre Channel unleash the full potential of high-density server virtualization, cloud architectures, and flash storage. They deliver operational stability, breakthrough performance, and increased business agility that enable organizations to accelerate data access, adapt to evolving requirements, and drive always-on business operations.

What is the Brocade G610 Switch?

The Brocade G610 is a cost-effective storage networking switch that delivers a flash-ready solution for the always-on, digital business. It provides exceptional price/performance value in an entry-level switch, combining up to 32G performance and simplicity with enterprise-class functionality. The Brocade G610 offers small to mid-sized data centers affordable access to industry-leading Gen 6 Fibre Channel technology.

Along with Gen 6 Fibre Channel, the Brocade G610 features Brocade Fabric Vision® technology and on-demand scalability for fast, easy, and cost-effective growth. Organizations can scale on demand from 8 to 24 ports supporting up to 32G speeds in an efficiently designed 1U package. In addition, administrators can quickly deploy Brocade G610 Switches in three simple steps using an easy-to-use, point-and-click user interface.

The Brocade G610 includes VM Insight, which enables proactive visibility into the health and performance of individual Virtual Machines (VMs) through integrated sensors. With this capability, administrators can quickly identify abnormal VM behaviors to facilitate troubleshooting and fault isolation, helping to ensure maximum performance and operational stability. Additional product details can be found in the Brocade G610 product brief.

What is the Brocade G620 Switch?

The Brocade G620 Switch meets the demands of hyperscale virtualization, larger cloud infrastructures, and growing flash-based storage environments by delivering market-leading Gen 6 Fibre Channel technology and capabilities. It provides a high-density building block for increased scalability to support growth, demanding workloads, and data center consolidation in small to large-scale enterprise infrastructures. Delivering unmatched 32G performance, industry-leading port density, and integrated network sensors, the Brocade G620 accelerates data access, adapts to evolving requirements, and drives always-on business. This high-density design enables organizations to pack more into a single data center with a smaller footprint, reducing costs and management complexity.

The Brocade G620 simplifies end-to-end management of large-scale environments by automating monitoring and diagnostics through Fabric Vision technology. The integrated IO Insight capability non-disruptively gathers I/O statistics, including device latency and IOPS metrics, to monitor I/O workloads and obtain insights into storage performance. The switch is also easy to deploy with the Brocade EZSwitchSetup wizard and ClearLink® Diagnostic Port (D_Port) feature, which simplifies setup. Additional product details can be found in the Brocade G620 product brief.

What is the Brocade G630 Switch?

The Brocade G630 Switch is an enterprise-class 128-port 32G building block for demanding workloads and data center consolidation. The high-density 2U design enables organizations to pack more into a single data center with a smaller footprint, reducing costs and management complexity.

The Brocade G630 Switch delivers Gen 6 performance, industry-leading port density, and integrated network sensors with IO Insight for NVMe. These next-generation Fibre Channel-based technologies and capabilities enable the Brocade G630 to accelerate data access, adapt to evolving requirements, and drive always-on business operations for growing flash-based storage environments. The Brocade G630 is NVMe-ready, allowing organizations to seamlessly integrate Brocade Gen 6 Fibre Channel networks with the next generation of flash storage, without a disruptive rip-and-replace. In addition, it includes network sensors for advanced monitoring of NVMe workloads.

The Brocade G630 is configurable from 48 ports to 128 ports with 96 SFP+ ports and 8 Q-Flex ports capable of 32G. Organizations can quickly, easily, and cost-effectively scale with pay-as-you-grow Ports on Demand (PoD). Additional product details can be found in the Brocade G630 product brief.

What distinguishes Brocade G610, G620, and G630 Switches from other Brocade switches?

Gen 6 Fibre Channel is the purpose-built network infrastructure for mission-critical storage, delivering breakthrough performance, increased scalability, and operational stability. Brocade G610, G620, and G630 Switches with Gen 6 Fibre Channel and Brocade Fabric Vision technology provide 32G performance combined with unprecedented insight and visibility across the storage network. These powerful capabilities allow organizations to accelerate data access, adapt to evolving requirements, and drive always-on business operations for hyper-scale virtualization, larger cloud infrastructures, and growing flash-based storage environments. Brocade Gen 6 switches are the strategic platforms for transforming current SAN fabrics into flash-optimized, modern data centers.

See the following table for a detailed comparison of Brocade Gen 5 and Gen 6 Fibre Channel switches.

Feature	Large Enterprise **Brocade G630 with Gen 6**	Large Enterprise **Brocade 6520 with Gen 5**	Mid-size **Brocade G620 with Gen 6**	Mid-size **Brocade 6510 with Gen 5**	Entry-Level **Brocade G610 with Gen 6**	Entry-Level **Brocade 6505 with Gen 5**
Port Configurations	48, 72, 96, 128 ports. Additional configurations include: ■80 ports (48 ports + 32 Q-Flex) ■104 ports (72 ports + 32 Q-Flex)	48, 72, 96 ports	24, 36, 48, 64 ports or 24, 40, 52, 64 ports or 24, 36, 52, 64 ports	24, 36, 48 ports	8, 16, 24 ports	12, 24 ports
QSFP Ports	8	0	4	0	0	0
Supported Port Speeds	4G, 8G, 10G, 16G, 32G, 128G	2G, 4G, 8G, 16G	4G, 8G, 10G, 16G, 32G, 128G	2G, 4G, 8G, 10G, 16G	4G, 8G, 16G, 32G	2G, 4G, 8G, 16G
Total Bandwidth	4Tb/s	1.5Gb/s	2Tb/s	768Gb/s	768Gb/s	384Gb/s
ISL Trunking Bandwidth	256Gb/s	128Gb/s	256Gb/s	128Gb/s	256Gb/s	128Gb/s
Power Supply	Dual, hot-swappable	Dual, hot-swappable	Dual, hot-swappable	Dual, hot-swappable	Single, fixed	Single, hot-swappable, optional second power supply
Airflow	Front-to-back and back-to-front options	Front-to-back and back-to-front options	Front-to-back and back-to-front options	Front-to-back and back-to-front options	Back-to-front	Back-to-front
Energy Efficiency	0.23 watts/Gb/s	0.14 watts/Gb/s	0.10 watts/Gb/s	0.14 watts/Gb/s	0.10 watts/Gb/s	0.14 watts/Gb/s
Automation Support	Yes[a]	Yes[a]	Yes[a]	Yes[a]	Yes[a]	Yes[a]
Advanced I/O Metrics	Yes	No	Yes	No	No	No
VM Insight	Yes	No	Yes	No	Yes	No
Brocade ClearLink Diagnostic Port (D_Port)	Yes	Yes	Yes	Yes	Yes	Yes
In-flight Compression	Yes (64Gb/s compression bandwidth)	Yes	Yes (64Gb/s compression bandwidth)	Yes (32Gb/s compression bandwidth)	Not supported	No
Encryption	Yes	Yes	No	No	No	No
10G Native Fibre Channel	Yes	Yes	Yes	Yes	No	No
Forward Error Correction (FEC)	Yes/Standard	Yes/Standard	Yes/Standard	Yes	Yes/Standard	Yes

Feature	Large Enterprise Brocade G630 with Gen 6	Large Enterprise Brocade 6520 with Gen 5	Mid-size Brocade G620 with Gen 6	Mid-size Brocade 6510 with Gen 5	Entry-Level Brocade G610 with Gen 6	Entry-Level Brocade 6505 with Gen 5
ASIC-enabled Buffer Credit Loss Detection and Automatic Recovery at Virtual Channel Level	Yes	Yes	Yes	Yes	Yes	Yes
Concurrent Support for Top Talkers and Fibre Channel Routing	Yes	No support for Fibre Channel routing	Yes	Yes	No support for Fibre Channel routing	No support for Fibre Channel routing
E_Port Top Talkers	Yes	Yes	Yes	Yes	Yes	Yes

a. Supported with Brocade FOS 8.2 and above.

Benefits of Gen 6 Fibre Channel Technology

Feature	Gen 6	Gen 5	Benefits
More Buffers per ASIC	15,360	8,192	Congestion avoidance, better performance
Monitoring/Diagnostic Enhancements	Yes, with advanced IO Insight[a] and VM Insight metrics	Yes	Avoid fabric problems
Forward Error Correction	Yes/Standard	Yes	Automatic recovery of transmission errors enhances the reliability of transmission, resulting in higher availability and performance
In-flight Compression	Yes		
(64Gb/s compression bandwidth)	Yes		
(32Gb/s compression bandwidth)	Compression of ISL traffic for bandwidth optimization		
10G Native Fibre Channel[a]	Yes	Yes	Ability to configure any Gen 5 Fibre Channel port as 10G Fibre Channel eliminates the requirement for specialized ports for optical MAN (10G DWDM) connectivity
ASIC-enabled Buffer Credit Loss Detection and Automatic Recovery at Virtual Channel Level	Yes	Yes	Ensures application availability and performance by automatically recovering lost buffer credits without requiring any upfront configuration or user intervention
Auto Link Tuning for Back-end Ports	Yes	Yes	Optimizes the link automatically
E_Port Top Talkers and Concurrency with Fibre Channel Routing	Yes	Yes	Monitors top bandwidth-consuming flows in real time on each individual ISL and EX_Port

a. Not supported on the Brocade G610.

What is Brocade Fibre Channel automation?

With more than 20 years of storage networking experience, Brocade, a Broadcom company, understands the nuances that go into infrastructure management and what tasks can benefit from automation. By introducing REST APIs directly into its switch and management products, Brocade solutions offer a broad range of choices to enable any SAN management solution. IT organizations that couple robust data collecting capabilities with 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:

- Make standard REST APIs available directly from the switch in order to automate repetitive daily tasks, such as fabric inventory, provisioning, and operational state monitoring.
- Leverage Ansible to easily scale automation and orchestration across the entire infrastructure.

What REST APIs are provided?

Brocade solutions provide REST APIs natively from Brocade Fabric OS® (FOS) on Fibre Channel switches. The REST API from Brocade FOS provides access to all switch functionality. The Brocade FOS REST API is the foundation and primary API for SAN automation.

How can third-party tools take advantage of Brocade REST APIs?

Third-party tools can use Brocade FOS REST API directly in any programming language.

What is Brocade automation providing to Ansible?

Ansible is an open source automation and orchestration engine. Brocade automation offers a set of Ansible playbooks for common SAN automation tasks. These Ansible playbooks provide examples of how daily tasks-such as zoning, configuration management, and port provisioning-can be easily managed through Ansible to allow Fibre Channel SAN deployment and management as part of high-scale automation across compute, network, and storage IT infrastructure.

What Global Support offerings are available for Brocade G610, G620, and G630 Switches?

Customers can choose from an extensive portfolio of services and support offerings. Global Support services include assessment, design, implementation, and Brocade Resident Consultant services as well as Brocade Technical Support for Brocade G610, G620, and G630 Switches.

Global Support has the expertise to help organizations build resilient, efficient SAN infrastructures. Leveraging 20+ years of expertise in storage networking, Global Support delivers world-class technical support, implementation, and migration services to enable organizations to maximize their hardware and software investments, accelerate new technology deployments, and optimize the performance of their overall network.

Lifetime Warranty for the G610 Switch

What hardware coverage is included in this warranty?

If you experience a hardware failure, the unit will be replaced via a Next-Day-Parts (NDP) service-level agreement (SLA), which is defined as next-business-day response for parts replacement from the time Broadcom has determined that a replacement is required and has confirmed dispatch with the customer. The customer shall perform the physical installation of the replacement part and the defective product return. Additional details describing NDP are available at www.broadcom.com/support/fibre-channel-networking/direct-support.

What other support deliverables are included with the purchase of a G610?

Also included are software updates, 24x7 access to our Technical Assistance Center (TAC), and Brocade Support Link (BSL) for the duration of the warranty period. More details are available at www.broadcom.com/support/fibre-channel-networking/direct-support.

Do all Brocade G610 Switches come with a lifetime warranty?

No. The lifetime warranty applies to only those Brocade G610 Switches that were sold with a lifetime warranty at initial purchase.

Can I purchase a Brocade G610 Switch with a lifetime warranty through a Broadcom OEM partner?

Yes. The majority of Brocade switches are sold through Broadcom's OEM partners and are subject to the OEM partner's terms and conditions. The terms and conditions may vary across different Broadcom OEM partners.

What else should I know about this lifetime warranty?

The Brocade lifetime warranty is applicable only to the first end-user owner. The warranty duration is from the shipping date until the end-of-support (EOS) date, as announced by Broadcom.

What components are not covered by this warranty?

The lifetime warranty does not cover optics; the standard warranty covers these components. More details are available at www.broadcom.com/support/warranty/fibre-channel-networking.

How do I activate my lifetime warranty?

To activate your lifetime warranty, you will first need to register your G610 unit at support.broadcom.com. Once logged in, click **Brocade Products**, and then scroll down and click **Brocade G610 Lifetime Warranty Registration**. You will need to provide the unit's serial number and the full address where the unit is installed.

What if I want a higher service-level agreement (SLA), that is, 4 Hour Onsite or Premier Support?

Contact your local Brocade sales rep for a quote for a support upgrade.

Do I have to renew a support contract?

No. You are entitled to the lifetime warranty deliverables until the EOS date, so there is no need to renew support for the units ever again.

Is the warranty transferable?

No. The lifetime warranty is applicable only to the first end-user owner and is not transferable.

Is the lifetime warranty available for other products besides the G610?

No. The lifetime warranty is available only on the entry-level switch (G610) in the Brocade product portfolio.

Features

What are Q-Flex ports on the Brocade G620 and G630 Switches?

To reduce investment costs, energy consumption, and cabling requirements, the Brocade G620 and G630 Switches use a space-efficient, four-channel Quad Small Form-Factor Pluggable (QSFP) optic that enables high-density port configurations as well as improved serviceability and ease of use. QSFPs are the strategic platforms for transforming current SAN fabrics into flash- optimized, modern data centers. QSFP modules increase port density three to four times more than SFP+ modules and reduce the number of cables per switch from 64 to 16, significantly reducing cable management challenges.

Q-Flex ports are available for flexible ISL and device connectivity with industry-leading 128G or 32G speeds. These ports are designed to support a single QSFP or fan out to four standard SFP+ connections, enabling administrators to simplify cabling infrastructure. With the Brocade G630, organizations have the flexibility to mix and add Q-Flex ports at any time with Ports on Demand (PoD).

Brocade G620 and G630 Q-Flex ports support both 4×32G and 4×16G QSFPs for ISL connectivity. In addition, the 4×16G QSFP provides greater flexibility with breakout cable support.

QSFPs can be ordered with the following part numbers:

- 4×32G 2 km QSFP: XBR-000285 (supported on Brocade FOS 8.2.0 and higher)
- 4×32G QSFP: XBR-000275
- 4×16G QSFP: XBR-000245

Once I purchase a Q-Flex port PoD for Brocade G620 or G630 Switches, can I configure additional SFP+ port PoDs?

Yes. Users can mix and add a Q-Flex port PoD and SFP+ port PoDs in any order to the base configuration.

What Fibre Channel speeds are supported on the Brocade Q-Flex ports?

The Q-Flex ports are capable of 4×32G, 4×16G, 4×8G, or 4×4G Fibre Channel speeds. For the latest support information, refer to the hardware manual and the Brocade FOS Administrative Guide at www.broadcom.com.

Can Q-Flex ports on the Brocade G620 and G630 be connected to Q-Flex ports on Brocade FC16-64 and FC32-64 Blades?

Q-Flex ports can be used to aggregate edge switches into a core to form a high-density fabric with high-performance ISLs between Brocade FC16-64 and FC32-64 Port Blades in a Brocade X6 Director and Brocade G630 Switches.

Can Q-Flex ports on the Brocade G620 and G630 be connected to ICL ports on the Brocade DCX® 8510 Backbone?

No. This capability is not supported.

Do Q-Flex ports support splitter cables and patch panels?

Each Q-Flex port is capable of supporting 128Gb/s parallel Fibre Channel for device or ISL connectivity with MTP/MPO cables, MTP/MPO to LC breakout cables, and patch panels. This design supports a large number of device ports with simplified cable connectivity and enables Gen 6 solutions to integrate seamlessly into a structured cabling infrastructure.

What is Brocade Fabric Vision technology?

Brocade Fabric Vision technology is an advanced hardware and software solution that combines capabilities from the Brocade Fibre Channel ASIC, Brocade FOS, and Brocade management to help administrators address problems before they impact operations, accelerate new application deployments, and dramatically reduce operational costs.

Fabric Vision technology provides unprecedented visibility and insight across the storage network through innovative diagnostic, monitoring, and management technology.

What features and capabilities does Brocade Fabric Vision technology offer?

For additional information about Brocade Fabric Vision technology, visit www.broadcom.com/products/fibre-channel-networking/software/storage-fabrics-technology.

What are the Fabric Vision feature differences between Gen 5 and Gen 6?

See the following table for an overview of these feature differences.

Fabric Vision Features	8G Platforms	Gen 5 Platforms	Gen 6 Platforms
Latency Bottleneck Detection	Yes	Yes	Yes, with FPI Monitoring
Forward Error Correction	No	Yes	Yes
VC-Level BB_Credit Recovery	No	Yes	Yes
Brocade ClearLink Diagnostics (D_Port)	No	Yes	Yes
MAPS	Yes	Yes	Yes
Fabric Performance Impact (FPI) Monitoring	Yes	Yes	Yes
Flow Learning	Yes, with enhanced 8G blades	Yes	Yes
Flow Monitoring	Yes, with some limitations	Yes	Yes
Flow Mirroring	No	Yes	Yes
Flow Generator	No	Yes	Yes

Fabric Vision Features	8G Platforms	Gen 5 Platforms	Gen 6 Platforms
COMPASS	Yes	Yes	Yes
IO Insight	No	No	Yes, except for the Brocade G610
NVMe IO Insight for NVMe	No	No	Yes, only on the Brocade G630 and the Brocade X6 with the Brocade FC32-64 Blade
VM Insight	No	No	Yes

What are the advantages of Brocade Fabric Vision technology?

Brocade Fabric Vision technology provides a breakthrough hardware and software solution that helps simplify monitoring, maximize network availability, and dramatically reduce costs. Featuring innovative monitoring, management, and diagnostic capabilities, Fabric Vision technology enables administrators to avoid problems before they impact operations, helping their organizations meet SLAs.

For additional information about Brocade Fabric Vision technology, visit www.broadcom.com/products/fibre-channel-networking/software/storage-fabrics-technology.

What is IO Insight?

IO Insight is integrated within Brocade G620 and G630 Switches and Brocade X6 Directors. It helps organizations achieve greater control and insight to quickly identify the root cause of problems at the storage tier, reducing time to resolution so critical SLAs can be met. The IO Insight capability non-intrusively gathers I/O statistics, which can be used within an intuitive, policy-based monitoring and alerting suite to configure thresholds and alarms. In-band device latency and IOPS monitoring detects degraded storage performance, allowing administrators to proactively optimize performance and availability to ensure maximum performance.

What is IO Insight used for?

The primary use case for IO Insight is to understand storage I/O workloads and behaviors to ensure consistent and predicable performance. The second use case is to identify and isolate the source of storage device or network performance degradation so corrective action can be taken. The third use case is to leverage I/O statistics and metrics to optimize behavior between host and storage devices.

How can IO Insight metrics be monitored?

The Flow Vision feature provides the IO Insight metrics on Gen 6 switch device ports for a specific initiator-target or initiator-target- LUN flow. These metrics can be gathered on both SCSI and NVMe over Fibre Channel protocols. Administrators can import the flow into MAPS to configure thresholds on I/O latency metrics and receive alerts when those thresholds are exceeded.

How do IO Insight features differ among switch models?

The following table illustrates the IO Insight features available with different Brocade switches and directors.

Feature	Brocade G610	Brocade G620	Brocade G630	Brocade X6 Directors
IO Insight Support	N/A	Yes	Yes	Yes
NVMe Statistics	N/A	No	Yes	Yes, only with the Brocade FC32-64 Blade. Not with the Brocade FC32-48 Blade
Initiator-Target	N/A	Yes	Yes	Yes
Initiator-Target-LUN Flow	N/A	No	No	Yes
Metrics Available at Storage Ports	N/A	Yes	Yes	Yes
Metrics Available at Host Ports	N/A	No	No	Yes

What are the differences between IO Insight and the Brocade Analytics Monitoring Platform?

The following table shows the different features and capabilities of these technologies.

Fabric Vision with IO Insight	Brocade Analytics Monitoring Platform
SCSI Read/Write response/latency monitoring	Full visibility into all SCSI commands
Statically defined initiator-target or initiator-target-LUN flow	Automatic flow learning, including LUN learning
Alerts for host and storage outliers	Alerts for host, fabric, and storage outliers/individual I/O
Identifies latency and congestion	Identifies latency and congestion, and provides direct fabric latency monitoring
Monitors only Gen 6 Fibre Channel	Monitors both Gen 5 and Gen 6 Fibre Channel
Storage I/O-level monitoring	Large-scale, end-to-end I/O monitoring

What is VM Insight?

VM Insight uses standards-based, end-to-end VM tagging to gain VM visibility in a storage fabric. VM Insight enables the monitoring of VM-level application performance and baseline workload behavior. Using this information, storage administrators can quickly determine whether a storage fabric is the source of performance anomalies for VM-level applications. VM Insight also enables fast correlation with other Fabric Vision metrics to identify the root cause of problems before operations are affected. VM Insight provides the visibility for administrators to provision and plan storage networks based on application requirements, and to fine-tune the infrastructure to meet service-level objectives.

What is Brocade ClearLink Diagnostics?

The Brocade ClearLink Diagnostics tool leverages Brocade ClearLink Diagnostic Port (D_Port) mode to ensure optical and signal integrity for Fibre Channel optics and cables, simplifying deployment and support of high-performance fabrics. By proactively verifying the integrity of critical transceivers, organizations can quickly address any physical layer issues without the need for special optical testers.

ClearLink Diagnostics allows users to automate a battery of tests to measure and validate latency and distance across the switch links, as well as to verify the integrity of the fiber and optical transceivers in the fabric-prior to deployment or when there are suspected physical layer issues. With ClearLink Diagnostics, only the ports attached to the link being tested need to go offline, leaving the rest of the ports to operate online.

In addition to switch-to-switch link validation, ClearLink Diagnostics also provides the following:

- Dynamic ClearLink Diagnostics support between Gen 5 and Gen 6 Fibre Channel switches, QLogic, and Emulex® fabric adapters when running at 16G or 32G, allowing administrators to initiate tests from the adapter.
- The ability to configure settings to ensure consistency and automatically run D_Port tests based on port or switch events, including links over xWDM.
- D_Port pre-provisioning to improve operational control and avoid costly mistakes.
- D_Port integration into MAPS for threshold-based monitoring and alerting.
- Port LED for a visual indication of D_Port test result failures.
- Link power (dB) loss information with D_Port test results.
- Through collaboration with industry partners, Broadcom extends ClearLink Diagnostics to additional end devices and adapters, providing end-to-end physical layer diagnostics and validation.

What are the benefits of in-flight compression over Inter-Switch Links (ISLs) for Brocade G620?

In-flight compression optimizes network performance within the data center and over long-distance links. Data is compressed at the source and uncompressed at the destination. Performance varies by data type, but Brocade products use an efficient algorithm to generally achieve 2:1 compression with minimal impact on performance. Compression can be used in conjunction with in-flight encryption.

How many ports can be configured on the Brocade G620 and G630 Switches for in-flight compression?

Brocade G620 and G630 Switches support 64G of data compression.

Port Speed	Compression Enabled
32G	4 ports
16G	4 ports
10G	4 ports
8G	4 ports
4G	4 ports

NOTE: No license is required for this feature.

What is Fabric Performance Impact (FPI) Monitoring?

FPI Monitoring leverages predefined MAPS policies to automatically detect and alert administrators to different latency severity levels, and identifies slow drain devices that could impact network performance. This feature uses advanced monitoring capabilities and intuitive MAPS dashboard reporting to indicate various latency severity levels, pinpointing exactly which devices are causing or are impacted by a bottlenecked port, and quarantining slow drain devices automatically to prevent buffer credit starvation.

FPI Monitoring is an invaluable tool for SAN administrators, helping them to avoid problems that can impact application performance. At the same time, it provides Brocade users with capabilities not offered by third-party tools.

How can Dynamic Fabric Provisioning simplify server deployment?

Dynamic Fabric Provisioning (DFP) allows organizations to eliminate fabric reconfiguration when adding or replacing servers through the virtualization of host World Wide Names (WWNs). It combines Brocade and adapter technology to reduce or eliminate the need to modify zoning or Logical Unit Number (LUN) masking. In addition, DFP enables pre-provisioning of virtual WWNs, helping organizations eliminate time-consuming steps when deploying new equipment or moving devices within a switch. DFP currently requires Brocade adapters in the host.

How does the Gen 6 switching ASIC compare to previous generations?

The Gen 6 ASIC is the industry's most powerful and efficient switching technology. In addition to Gen 6 Fibre Channel 32G and 128G speeds, it includes more bandwidth (up to 4Tb/s), faster I/O performance (566 million frames switched per second per ASIC), more functionality (including D_Port, in-flight compression, and Forward Error Correction [FEC]), and higher energy efficiency (just 0.1W per Gb/s).

What power management features are included?

Brocade G610, G620, and G630 Switches support real-time power measurement, providing insight into power consumption in the fabric.

Brocade G610, G620, and G630 Hardware

Can an existing 16G Brocade switch be upgraded to 32G functionality?

No. An existing 16G switch does not support 32G capabilities.

Are Brocade Small Form-Factor Pluggables (SFPs) and QSFPs required for the Gen 6 Fibre Channel switches?

Yes. Both the Brocade G610 and Brocade G620 Switches require Brocade-branded SFP optics. For the Q-Flex ports on the Brocade G620, Brocade-branded QSFP optics also are required.

Why do Brocade G610, G620, and G630 Switches require Brocade SFP optics?

This provides quality control that in turn avoids application downtime. The greater the port speed—especially 32G—the less tolerance that switches have for out-of-spec wavelengths, which can lead to port failure and application interruption.

Are supported cable distances affected by 32G?

Yes. Supported distances are reduced as Fibre Channel speed increases. See the following table.

Transceiver Type	Form Factor	Speed	Multi-Mode Maximum Distance				Single Mode Maximum Distance
			OM1	OM2	OM3	OM4	
SWL	SFP+	32G	—	—	70m	100m	Not applicable
	SFP+	16G	15m	35m	100m	125m	Not applicable
	SFP+	10G	33m	82m	300m	550m	
	SFP+	8G	21m	50m	150m	190m	
LWL	SFP+	32G	Not applicable				Not available with Brocade FOS 8.0
	SFP+	16G					10 km
	SFP+	10G					10 km
	SFP+	8G					10 km, 25 km
ELWL	SFP+	32G	Not applicable				Not supported with Brocade FOS 8.0
	SFP+	16G					10 km, 25 km

Are the Brocade G610 Switch optics upgradable from 16G optics to 32G optics?

Yes. The Brocade G610 includes 16G optics; however, this switch was purpose-built to address the growing requirements of a small to midsized business customer. Customers that need to upgrade due to expanding data requirements or advanced flash storage have the flexibility to upgrade the 16G optics to 32G optics as needed.

Why does the Brocade G610 have only one power supply? Can I upgrade the Brocade G610 to include a second power supply?

The Brocade G610 Switch is purpose-built with a single, fixed power supply to deliver an affordable solution. The Brocade G610 Switch cannot be upgraded with a second power supply. Therefore, organizations looking for a redundant power supply solution should consider the Brocade G620 Switch for this requirement.

Brocade G610, G620, and G630 Software

How is Brocade Fabric Vision technology offered?

Some Fabric Vision technology features and capabilities, such as Brocade ClearLink Diagnostics, are provided as base-level features of Brocade Fabric OS. Other features, such as MAPS, VM Insight, and Flow Vision, are available through an optional Fabric Vision license. Contact your OEM for specific details on licensing and pricing.

What SAN management software is supported on Brocade G610, G620, and G630 Switches?

Brocade SANnav™ Management Portal and Brocade SANnav Global View are supported on all Brocade G610, G620, and G630 Switches. However, to run SANnav Management Portal, the switches must be running Brocade FOS 7.4 or above.

For more information on Brocade SANnav Management Portal and Brocade SANnav Global View, visit www.broadcom.com/sannav.

Is a trial license available for both Brocade SANnav management software tools?

Yes. Downloadable, 90-day trial versions of both SANnav Management Portal and SANnav Global View are available. These trial versions provide full functionality and can support up to 15,000 instances and ports. For additional information, refer to the Brocade SANnav Management Portal and SANnav Global View FAQ at www.broadcom.com.

What other tools are available to simplify management of Brocade G610, G620, and G630 Switches?

Brocade G610, G620, and G630 Switches support EZSwitchSetup for intuitive plug-and-play deployment in three simple steps. The EZSwitchSetup is an easy-to-use application featuring a graphical user interface (GUI) that is designed to speed up the time required for setting up, configuring, and managing Brocade Fibre Channel switches. One of the key attributes of EZSwitchSetup is ease of use and flexibility; administrators can run the application from a computer used for SAN administration, or the application can be set up to run from a computer that is not part of the SAN, such as a laptop. The EZSwitchSetup Switch Manager allows the administrator to monitor the switch, manage custom zoning, and perform basic switch configurations. The easy-to-use GUI allows the user to view port and HBA status, temperature, fan, and power supply status, as well as detailed information about devices that are connected to the switch. In addition, EZSwitchSetup Switch Manager delivers visibility when adding Ports on Demand (PoD).

What is Brocade Access Gateway mode?

Brocade Access Gateway mode can make a switch appear transparent to hosts or the network fabric. With a switch configured in Access Gateway mode, F_Ports connect to the fabric as N_Ports rather than E_Ports. This allows more hosts (and VMs) to access the fabric without increasing the number of switches-thereby simplifying configuration and reducing the number of Domain IDs to manage. Access Gateway enhancements include Brocade Frame-based Trunking, QoS, ClearLink Diagnostic Port (D_Port), FEC, and interoperability with multivendor fabrics. Refer to Brocade FOS release notes for additional Access Gateway enhancements.

Do Brocade G610 and G620 Switches support Access Gateway mode?

Yes. Brocade G610 and G620 Switches support Access Gateway mode. The Brocade G630 does not support Access Gateway mode.

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