HP SAN Network Advisor Software

HP StoreFabric B-series 16Gb Fibre Channel Switches

- **HP Storage Solution: HP 3PAR StorServ and HP StoreFabric B-series**
  The world of storage is changing rapidly. Advances in virtualization, cloud computing, I.T. as a service, and big data are driving value and competitive advantage to companies that deploy these technologies. But to fully realize the benefits of these new technologies, companies often need to upgrade their storage and storage networking environments. Fortunately, HP Storage is here to help.
- **HP Intelligent Infrastructure Analyzer Software**
  To help minimize downtime, HP created an online software diagnostic tool that monitors the health of your Storage Area Network and predicts networking failures before they happen. The new HP Intelligent Infrastructure Analyzer Software provides online, real-time status information on the physical layer of B-Series switches.
- **HP PremierFlex Fiber Optic Cables**
  Explore the key features and benefits of HP's PremierFlex Fiber Optic cables.
- **HP SN8000B 16Gb SAN director family**
  SN8000B - Powerful Fibre Channel switching infrastructure solutions
  HP SN8000B SAN Directors are the industry's most powerful Fibre Channel switching infrastructure solutions, providing the most reliable, scalable, high-performance foundation for private cloud storage and highly virtualized environments. The SN8000B SAN Director family leverages proven DC SAN Director Switch technology and consists of an 8-slot 14U chassis and a 4-slot 9U chassis.
  - ○ **Industry Leading Performance**
    HP SN8000B SAN Directors feature industry-leading 16 Gbps performance and 16.4 Tbit/s of full duplex chassis bandwidth to address next-generation I/O- and bandwidth-intensive applications for private cloud storage and highly virtualized environments.
  - ○ **Optimizes Business Continuity and Disaster Recovery Solutions**
    Enables flexible, high-speed replication solutions over metro or WAN links with native 10 Gbps Fibre Channel or 10GbE FCIP extension support. Minimizes the risk of unauthorized access with in-flight data encryption at wire speed. Reduces bandwidth costs with in-flight data compression at wire speed.
  - ○ **Simplifies Deployment and Reduces Costs**
    HP SN8000B SAN Directors accelerate deployment and troubleshooting tasks with new inline port diagnostics and advanced monitoring. Simplifies and centralizes management of server connectivity and network resources through HP SAN Network Advisor.
  - ○ **SN8000B 8-Slot SAN Director Performance**
    384 ports operating simultaneously at full 16Gb speed (maximum). 16.4 Tbit/sec of full duplex chassis bandwidth. 2 Tbit/sec of Inter Chassis Link (ICL) bandwidth (freeing up to 128 16 Gb ports for server, storage, and fabric connections). ISL Trunking -Up to eight 16 Gbps ports per ISL trunk; up to 128 Gbps per ISL trunk. 8Gb and 16Gb Fibre Channel port blade options.
  - ○ **SN8000B 4-Slot SAN Director Performance**
    192 ports operating simultaneously at full 16Gb speed (maximum). 8.2 Tbit/sec of full duplex chassis bandwidth. 1 Tbit/sec of Inter Chassis Link (ICL). ISL Trunking -Up to eight 16 Gbps ports per ISL trunk; up to 128 Gbps per ISL trunk. 8Gb and 16Gb Fibre Channel port blade options.

- **HP SN8000B 16Gb SAN director blades**
  HP SN8000B SAN Directors offer customers flexibility.
  The HP SN8000B SAN Directors support a broad set of blades that offer customers the flexibility to support the infrastructure needs of their growing datacenters. These include:
- - 16Gb port blades
- - Enhanced 8Gb port blades
- - Enhanced Multiprotocol Extension blades
- - Encryption Blades
- Please refer to the technical specifications document for further details.
- With the flexibility in its blade offerings, the HP SN8000B SAN Director offers the following benefits:
- - It enables simpler, flatter, low-latency chassis connectivity to reduce network complexity, management, and costs
- - It optimizes data center connectivity over distance with integrated high-performance metro and global connectivity
- - It simplifies and centralizes end-to-end SAN management with comprehensive diagnostics, monitoring, and automation
- - It maximizes performance for I/O and bandwidth-intensive applications
- - It protects investments in existing SAN fabrics and automation tools while reducing operational costs and minimizing business disruption
- **HP SN3000B Fibre Channel Switch**
  SN3000B - Exceptional price/performance value
  The HP SN3000B Fibre Channel Switch yields exceptional price/performance value and offers low-cost access to industry-leading Storage Area Network (SAN) technology while providing pay-as-you-grow scalability to meet the needs of an evolving storage environment. Designed to enable maximum flexibility and investment protection, the SN3000B Switch is configurable in 12 or 24 ports and supports 4, 8, or 16 Gbps speeds in an efficiently designed 1U package. It also provides a simplified deployment process and a point-and-click user interface-making it both powerful and easy to use.
- - 24×16 Gbps FC front-end ports that support 4, 8, and 16 Gbps speeds
- - Total full duplex chassis bandwidth up to 768 Gbps
- - Features Ports on Demand (PoD) capabilities for fast, easy, and cost-effective scaling from 12 to 24 ports in a 12-port increment
- - Single power supply with integrated fan with option for hot-swappable redundant power supply
- - 128 Gbps frame-based trunks
- - Ethernet, console, and USB management ports
- - Standard FC features: trunking, NPIV, E/F/EX port types, Virtual Fabrics
- - Support for optic/media diagnostic features and real-time power monitoring
- **HP SN6000B Fibre Channel Switch**
  SN6000B - Meets the demands of hyper-scale, private cloud storage environments
  The HP SN6000B Fibre Channel Switch meets the demands of hyper-scale, private cloud storage environments by delivering market-leading 16 Gb Fibre Channel technology and capabilities that support highly virtualized environments. Designed to enable maximum flexibility and investment protection, the SN6000B Switch is configurable in 24, 36, or 48 ports and supports 4, 8, 10, or 16 Gbps speeds in an efficiently designed 1U package.
- - 48×16 Gbps FC front-end ports that support 4, 8, 10, and 16 Gbps speeds
- - Features Ports on Demand (PoD) capabilities for fast, easy, and cost-effective scaling from 24 to 48 ports in 12-port increments
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  SN6500B - High-end switch for private cloud and virtualized data centre environment
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configurable in 48, 72 or 96 ports and supports 4, 8 or 16 Gbps speeds in an efficiently designed 2U package.

- ○ **Flexibility & Adaptability**

  High scalability in an ultra-dense 96-port switch. Pay-as-you-grow on-demand flexibility with 48 to 96 ports. Flexible speed options up to 16 Gbps for investment protection in existing SAN fabrics

- ○ **Reliability**

  Proven B-series reliability and operational simplicity for demanding enterprise data centers. Enhanced diagnostics and RAS functionality to help minimize downtime

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  Unmatched bandwidth with 96 non-blocking 16 Gbps ports. Up to eight in-flight encryption and compression ports delivering security & bandwidth savings. Optimized link and bandwidth utilization with ISL Trunking and Dynamic Path selection (DPS)

- ○ **Included Features**

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- ○ **Ease of use**

  Out-of-the-box group management of directors, switches, and embedded products, including 16 Gbps FC platforms. Automation of manual, repetitive, time-consuming, and error-prone tasks

- ○ **Proactive Monitoring and performance optimization**

  Proactively monitor, troubleshoot, diagnose, and provide event notification regarding critical health information at varying levels of detail. Configure Quality of Service (QoS) priorities to optimize the performance of applications running on physical and virtual servers. Collect and display performance statistics in real time and utilize historical views for proactive problem determination

- ○ **Simplified management**

  Simple wizards to configure Fibre Channel, FICON, FCIP tunnels, encryption switches, and HBAs. Integrated SAN diagnostics, policy monitoring, and bottleneck detection. Wizards-based zoning configuration, including LSAN zoning and zoning reports. Simplified management of virtual fabrics

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    192 ports operating simultaneously at full 16Gb speed (maximum). 8.2 Tbit/sec of full duplex chassis bandwidth. 1 Tbit/sec of Inter Chassis Link (ICL). ISL Trunking -Up to eight 16 Gbps ports per ISL trunk; up to 128 Gbps per ISL trunk. 8Gb and 16Gb Fibre Channel port blade options.
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- - 128 Gbps frame-based trunks
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  - 1. Restriction of Hazardous Substances Directive or RoHS is a directive adopted by the European Union that restricts the use of certain hazardous materials in the manufacture of various types of electronic and electrical equipment. The RoHS compliant products with new part numbers listed in this document are functionally equivalent to the corresponding products with old part numbers and are fully interchangeable.

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  384 ports operating simultaneously at full 16Gb speed (maximum). 16.4 Tbit/sec of full duplex chassis bandwidth. 2 Tbit/sec of Inter Chassis Link (ICL) bandwidth (freeing up to 128 16 Gb ports for server, storage, and fabric connections). ISL Trunking -Up to eight 16 Gbps ports per ISL trunk; up to 128 Gbps per ISL trunk. 8Gb and 16Gb Fibre Channel port blade options.

- ○ **SN8000B 4-Slot SAN Director Performance**
  192 ports operating simultaneously at full 16Gb speed (maximum). 8.2 Tbit/sec of full duplex chassis bandwidth. 1 Tbit/sec of Inter Chassis Link (ICL). ISL Trunking -Up to eight 16 Gbps ports per ISL trunk; up to 128 Gbps per ISL trunk. 8Gb and 16Gb Fibre Channel port blade options.

- **HP SN8000B 16Gb SAN director blades**
  HP SN8000B SAN Directors offer customers flexibility.
  The HP SN8000B SAN Directors support a broad set of blades that offer customers the flexibility to support the infrastructure needs of their growing datacenters. These include:

- - 16Gb port blades

- - Enhanced 8Gb port blades
- - Enhanced Multiprotocol Extension blades
- - Encryption Blades
- Please refer to the technical specifications document for further details.
- With the flexibility in its blade offerings, the HP SN8000B SAN Director offers the following benefits:
- - It enables simpler, flatter, low-latency chassis connectivity to reduce network complexity, management, and costs
- - It optimizes data center connectivity over distance with integrated high-performance metro and global connectivity
- - It simplifies and centralizes end-to-end SAN management with comprehensive diagnostics, monitoring, and automation
- - It maximizes performance for I/O and bandwidth-intensive applications
- - It protects investments in existing SAN fabrics and automation tools while reducing operational costs and minimizing business disruption

- **HP SN3000B Fibre Channel Switch**

  SN3000B - Exceptional price/performance value

  The HP SN3000B Fibre Channel Switch yields exceptional price/performance value and offers low-cost access to industry-leading Storage Area Network (SAN) technology while providing pay-as-you-grow scalability to meet the needs of an evolving storage environment. Designed to enable maximum flexibility and investment protection, the SN3000B Switch is configurable in 12 or 24 ports and supports 4, 8, or 16 Gbps speeds in an efficiently designed 1U package. It also provides a simplified deployment process and a point-and-click user interface-making it both powerful and easy to use.
- - 24×16 Gbps FC front-end ports that support 4, 8, and 16 Gbps speeds
- - Total full duplex chassis bandwidth up to 768 Gbps
- - Features Ports on Demand (PoD) capabilities for fast, easy, and cost-effective scaling from 12 to 24 ports in a 12-port increment
- - Single power supply with integrated fan with option for hot-swappable redundant power supply
- - 128 Gbps frame-based trunks
- - Ethernet, console, and USB management ports
- - Standard FC features: trunking, NPIV, E/F/EX port types, Virtual Fabrics
- - Support for optic/media diagnostic features and real-time power monitoring

- **HP SN6000B Fibre Channel Switch**

  SN6000B - Meets the demands of hyper-scale, private cloud storage environments

  The HP SN6000B Fibre Channel Switch meets the demands of hyper-scale, private cloud storage environments by delivering market-leading 16 Gb Fibre Channel technology and capabilities that support highly virtualized environments. Designed to enable maximum flexibility and investment protection, the SN6000B Switch is configurable in 24, 36, or 48 ports and supports 4, 8, 10, or 16 Gbps speeds in an efficiently designed 1U package.
- - 48×16 Gbps FC front-end ports that support 4, 8, 10, and 16 Gbps speeds
- - Features Ports on Demand (PoD) capabilities for fast, easy, and cost-effective scaling from 24 to 48 ports in 12-port increments
- - Dual-power supplies with integrated fans
- - Ethernet, console, and USB management ports
- - Standard FC features: trunking, NPIV, E/F/EX port types, Virtual Fabrics
- - Support for in-flight encryption and compression
- - Support for optic/media diagnostic features and real-time power monitoring

- **HP StoreFabric SN6500B 16Gb FC Switch**

  SN6500B - High-end switch for private cloud and virtualized data centre environment

  The HP StoreFabric SN6500B 16Gb FC Switch is a high-end switch for private cloud and virtualized data centre environments. It is ideal for medium- to large-sized organizations that need a scalable, high-availability solution that will facilitate consolidation and the flexibility to meet rapidly evolving storage requirements. Designed to enable maximum flexibility and investment protection, the SN6500B Switch is configurable in 48, 72 or 96 ports and supports 4, 8 or 16 Gbps speeds in an efficiently designed 2U package.

- **Flexibility & Adaptability**

  High scalability in an ultra-dense 96-port switch. Pay-as-you-grow on-demand flexibility with 48 to 96 ports. Flexible speed options up to 16 Gbps for investment protection in existing SAN fabrics

- ○ **Reliability**

  Proven B-series reliability and operational simplicity for demanding enterprise data centers. Enhanced diagnostics and RAS functionality to help minimize downtime

- ○ **Optimized Performance**

  Unmatched bandwidth with 96 non-blocking 16 Gbps ports. Up to eight in-flight encryption and compression ports delivering security & bandwidth savings. Optimized link and bandwidth utilization with ISL Trunking and Dynamic Path selection (DPS)

- ○ **Included Features**

  96×16 Gbps FC front-end ports that support 4, 8, and 16 Gbps speeds. Features Ports on Demand (PoD) capabilities for fast, easy, and cost-effective scaling from 48 to 96 ports in 24-port increments. Two integrated redundant, hot swappable power supplies with three hot-swappable redundant cooling fans
Ethernet, console, and USB management ports. Standard FC features: trunking, NPIV, E/F/EX port types, Virtual Fabrics. Support for in-flight encryption and compression. Support for optic/media diagnostic features and real-time power monitoring

- • **HP SAN Network Advisor Software**

  Manage your HP StoreFabric SAN directors and fabric switches

  Easily manage your HP StoreFabric SAN directors and fabric switches with HP SAN Network Advisor. Not only does HP SAN Network Advisor simplify operations by providing centralized, end-to-end management of SANs but it also provides critical flexibility, seamlessly scaling from small environments to large-scale and highly distributed geographic locations. HP StoreFabric B-series SAN Network Advisor provides comprehensive management of data center fabrics-including configuration, monitoring, and management of all B-series Directors, Switches and HBAs. It provides support for FC SANs with configuration, zoning, and visualization capabilities. SAN diagnostics help meet SLAs via proactive alerting and advanced SAN diagnostic capabilities, including SAN port diagnostics, bottleneck detection, and best-practices validation of SAN configurations.

- ○ **Ease of use**

  Out-of-the-box group management of directors, switches, and embedded products, including 16 Gbps FC platforms. Automation of manual, repetitive, time-consuming, and error-prone tasks

- ○ **Proactive Monitoring and performance optimization**

  Proactively monitor, troubleshoot, diagnose, and provide event notification regarding critical health information at varying levels of detail. Configure Quality of Service (QoS) priorities to optimize the performance of applications running on physical and virtual servers. Collect and display performance statistics in real time and utilize historical views for proactive problem determination

- ○ **Simplified management**

  Simple wizards to configure Fibre Channel, FICON, FCIP tunnels, encryption switches, and HBAs. Integrated SAN diagnostics, policy monitoring, and bottleneck detection. Wizards-based zoning configuration, including LSAN zoning and zoning reports. Simplified management of virtual fabrics

  - • 1. Restriction of Hazardous Substances Directive or RoHS is a directive adopted by the European Union that restricts the use of certain hazardous materials in the manufacture of various types of electronic and electrical equipment. The RoHS compliant products with new part numbers listed in this document are functionally equivalent to the corresponding products with old part numbers and are fully interchangeable.

HP SN8000B 16Gb SAN director family

HP StoreFabric B-series 16Gb Fibre Channel Switches

HP Storage Solution: HP 3PAR StorServ and HP StoreFabric B-series
The world of storage is changing rapidly. Advances in virtualization, cloud computing, I.T. as a service, and big data are driving value and competitive advantage to companies that deploy these technologies. But to fully realize the benefits of these new technologies, companies often need to upgrade their storage and storage networking environments. Fortunately, HP Storage is here to help.

- **HP Intelligent Infrastructure Analyzer Software**
  To help minimize downtime, HP created an online software diagnostic tool that monitors the health of your Storage Area Network and predicts networking failures before they happen. The new HP Intelligent Infrastructure Analyzer Software provides online, real-time status information on the physical layer of B-Series switches.

- **HP PremierFlex Fiber Optic Cables**
  Explore the key features and benefits of HP's PremierFlex Fiber Optic cables.

- **HP SN8000B 16Gb SAN director family**
  SN8000B - Powerful Fibre Channel switching infrastructure solutions
  HP SN8000B SAN Directors are the industry's most powerful Fibre Channel switching infrastructure solutions, providing the most reliable, scalable, high-performance foundation for private cloud storage and highly virtualized environments. The SN8000B SAN Director family leverages proven DC SAN Director Switch technology and consists of an 8-slot 14U chassis and a 4-slot 9U chassis.
    - **Industry Leading Performance**
      HP SN8000B SAN Directors feature industry-leading 16 Gbps performance and 16.4 Tbit/s of full duplex chassis bandwidth to address next-generation I/O- and bandwidth-intensive applications for private cloud storage and highly virtualized environments.
    - **Optimizes Business Continuity and Disaster Recovery Solutions**
      Enables flexible, high-speed replication solutions over metro or WAN links with native 10 Gbps Fibre Channel or 10GbE FCIP extension support. Minimizes the risk of unauthorized access with in-flight data encryption at wire speed. Reduces bandwidth costs with in-flight data compression at wire speed.
    - **Simplifies Deployment and Reduces Costs**
      HP SN8000B SAN Directors accelerate deployment and troubleshooting tasks with new inline port diagnostics and advanced monitoring. Simplifies and centralizes management of server connectivity and network resources through HP SAN Network Advisor.
    - **SN8000B 8-Slot SAN Director Performance**
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    - **SN8000B 4-Slot SAN Director Performance**
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