

### Advanced Performance Monitoring

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262870-B21

The Advanced Performance Monitoring license enables the Advanced Performance Monitoring features resident in the firmware and hardware for the following 2Gb/s HP StorageWorks SAN switches:

#### HP StorageWorks SAN Switch 2/16

287055-B21

#### HP StorageWorks SAN Switch 2/16-EL

283056-B21

#### HP StorageWorks SAN Switch 2/8-EL

258707-B21

Advanced Performance Monitoring optimizes fabric performance, resource utilization, and measuring end-to-end service levels in large Storage Area Networks (SANs). Advanced Performance Monitoring assists SAN administrators optimize fabric resource allocation, maximize performance tuning, reduce troubleshooting time, and improve capacity planning. It provides end-to-end performance measurement from the source to the destination target. Management canvasses (up to eight graphs each) can be created to monitor whole solution stacks and support level agreements or bill-back applications.

## CUSTOMER BENEFITS

- Increases end-to-end visibility into the fabric
- Improves performance tuning and resource optimization
- Shortens troubleshooting time
- Increases productivity with preformatted and customizable screens and reports
- Enables more accurate reporting for service level agreements and charged access applications

The performance monitoring features can be used as long as the data path of the target flows through a switch that has Frame Filtering capabilities. Existing StorageWorks switches do not need to be replaced or modified.

## SOFTWARE FEATURES/FUNCTIONALITY

Feature	Function	Benefit
<b>Source ID to Destination ID (SID/DID) Measurement</b>	Allows end-to-end performance monitoring of traffic between a specific server and a unique storage device	<ul style="list-style-type: none"><li>• Increases end-to-end visibility into the fabric</li><li>• Enables more accurate reporting for service level agreements and charged-access applications</li></ul>
<b>Switch and Port Measurement</b>	Monitors any SAN and loop device performance parameter in the first 64 bytes of the Fibre channel frame. Includes predefined views by bandwidth (trunked and nontrunked), LUN, SCSI command, CRC error, and protocol	<ul style="list-style-type: none"><li>• Simplifies SAN capacity planning</li><li>• Improves performance tuning</li><li>• Reduces troubleshooting time</li><li>• Maximizes fabric resource optimization</li></ul>
<b>Graphical User Interface in WEB TOOLS</b>	Simplifies performance monitoring with a library of predefined graphs. Administrators can create a canvas of up to eight graphs and save them for future use	<ul style="list-style-type: none"><li>• Increases productivity with preformatted and customizable screens and reports</li></ul>

### HARDWARE SUPPORT

Fibre Channel Switches	Part Numbers
HP StorageWorks SAN Switch 2/16	287055-B21
HP StorageWorks SAN Switch 2/16-EL	283056-B21
HP StorageWorks SAN Switch 2/8-EL	258707-B21

### STORAGE ARRAY SYSTEMS

Enables consolidation of physical disk storage that is logically combined to create a single large pool of disk space from which virtual disks can be created and tailored to the user/application requirements

- HP StorageWorks RAID Array 4100
- HP StorageWorks Modular SAN Array 1000
- HP StorageWorks Enterprise Virtual Array
- HP StorageWorks Modular Array 6000
- HP StorageWorks RAID Array 8000, Enterprise Modular Array 12000
- HP StorageWorks Enterprise Modular Array 16000

#### Refer to the SAN Design Guide for HBA and Configuration Details

<ftp://ftp.compaq.com/pub/products/storageworks/techdoc/director64/AA-RMPND-TE.pdf>

**Primary Applications:** Advanced Performance Monitoring

**High-performance applications:** Large databases (OLTP, OLAP), customer relationship management, enterprise resource planning, supply chain management

**Charge-back applications:** Service level agreements, billed services

**Storage infrastructure:** Storage consolidation (email, databases)

**Example:** E-mail System Service Level Agreement

In the following diagram, the Advanced Performance monitoring service is providing end-to-end performance data about an e-mail system. The administrator can track the transaction information from the source to the destination. The data is used to optimize the number of clients assigned to each system and to show compliance with the internal service level agreement that the IT department has with its business end users. Because end-to-end data is collected by bandwidth utilization and the types of storage commands (reads, writes, read/writes) the user groups are charged by the amount of traffic they generate to more accurately reflect the overhead they contribute to the infrastructure.

#### Performance Monitoring Service

E-mail solution using the Advanced Performance Monitoring Service.

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