



Network Audit

Verify and Achieve Optimum Network Performance

Service Highlights

Carrier-class networks require consistent maintenance and vigilance to ensure reliable service delivery and adherence to end user service level agreements (SLAs). Sycamore Networks engineers are uniquely qualified to assess the Sycamore products in your network for hardware and software integrity, standards consistency, and potential issues. By doing a network audit, our technical experts can verify that all provisionable parameters are documented and all hardware and software versions are up to date. Their work confirms that each node configuration complies with your planned network standards and with our recommendations.

The detailed telemetry on Sycamore products allows audit engineers to physically characterize a system remotely, by looking at optical power levels, and by referencing both industry standard and proprietary performance monitoring statistics. An on-site audit can further quantify the integrity of your multiservice network. On site, our systems engineers measure and document parameters such as Optical Signal to Noise Ratio, Chromatic Dispersion, and Polarization Mode Dispersion. They also check node power and grounding standards, and sample optical cleanliness on any interfaces you request.

In networks installed by Sycamore, our engineers compare audit data with system characteristics on the day the network was handed over for service, to quickly identify areas of change. During the audit process, if we believe any survey item warrants further investigation, with your agreement, we will add activities focused on the specific concern. Our report contains detailed audit findings and general recommendations, if any, for improving the overall health of your network.

Service Benefits

A network health audit can be used to enhance overall network performance, as part of routine maintenance; to verify current conditions prior to an expansion project or before introducing new equipment or services; or to ease integration when acquiring another company's network assets.

Our engineers can audit Sycamore hardware and software more efficiently than your in-house personnel. Specialized expertise in optical networks, test equipment, and processes, and familiarity with large network operations, ensures results that will simplify multiservice provisioning and troubleshooting while preserving network integrity. Throughout the process, you are free to focus on day-to-day operations and service delivery.

Features and Benefits

- Ensures optimal long-term performance of Sycamore products
- Benchmark measurements for hardware and software functions
- Detailed report and recommendations for improving network health
- ISO 9001:2000 registered, proven methodology for consistent quality
- Verifies the network meets your performance standards

Audit findings typically reveal opportunities for immediate improvement and provide a baseline for future comparison. Discovering chokepoints and stranded bandwidth, for example, are the first step in moving you closer to maximum capacity utilization and realizing the full potential of your network. Optimizing product and network performance preserves maintainability, enhances operational efficiency, and contributes to high network availability. A Sycamore network audit also delivers information that can help you meet important business objectives, including ROI and margin improvements, and lower the total cost of network ownership.

Network Audit Deliverables

Sycamore engineering services creates a Method of Procedure (MOP) that outlines the focus areas for your network audit. Typical steps in the audit process include:

Remote Survey

Logging into pertinent nodes in the network, via remote access to SilvXManager or the IP network containing Sycamore equipment, to check performance parameters:

- *Amplifier Gains* – comparing provisioned and measured values to published recommendations for specific span designs
- *Optical Power Levels* – with approval and clearance of the customer's NOC, measuring optical power levels and comparing samples to historical data and/or product recommendations
- *Performance Monitoring Statistics* – checking data against expected performance and/or known network issues; validating against customer SLAs
- *Hardware, Software, and Firmware Revisions* – verifying all revision levels for compliance with the applicable software versions and upgrade plans
- *Timing Configurations* – verifying the timing source and configuration setup for Sycamore equipment against the customer's network synchronization plan

On-Site Survey

Conducting an on-site survey to ensure the physical condition of Sycamore equipment and ancillary components meets our recommended standards and allows optimal product performance:

- *Power Connections, Cabling, and Grounding* – inspecting power voltage readings at the equipment and at the power plant; proper sizing of the wiring for a particular cable run; breaker sizing at the BDF; indication of any visible damage to the installation; and verifying the adequacy of chassis and site grounding systems

SYCAMORE NETWORKS SERVICES AND SUPPORT

A worldwide network of experienced professionals supports Sycamore Networks customers at every phase of the network operations lifecycle, from initial design, installation, and training to ongoing maintenance and capacity planning. Our in-house experts and select service partners have earned a reputation for excellence from some of the world's largest carriers. For intelligent optical switching and network migration deployments, Sycamore is uniquely qualified to meet the expectations of top tier customers. Our expertise and experience are your assurance of consistently successful deployments, high network availability, and outstanding customer service.

To learn more about our comprehensive portfolio of support services, please call 978-250-3480 or visit our web site at www.sycamorenet.com.

- *Labeling* – confirming proper chassis and fiber labels, and availability of up-to-date documentation on site
- *Fiber Management* – inspecting fiber management implementation, including basic routing around the chassis, micro bends, slack storage, and possible pinch points; confirming proper use of attenuators on the system
- *Optical Signal to Noise Ratios* – with approval of customer's NOC, measuring OSNR and spot checking for optical cleanliness
- *Environmental Conditions* – physical audit verifying that the temperature and airflow through the cabinet are well within the published environmental standards; inspecting for presence and condition of air filters, signs of visible moisture, and any other environmental concerns; verifying overall site cleanliness and maintainability
- *Timing and Telemetry Cabling* – confirming design suitability and proper function of cabling for telemetry and timing interfaces, per customer's planned configurations

Audit Report

Upon completion, Sycamore delivers a report with detailed survey findings and recommendations for improving network health.

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Sycamore Networks, Inc. (NASDAQ: SCMR) is a leading provider of intelligent bandwidth management solutions for fixed line and mobile network operators worldwide. From multiservice access networks to the optical core, Sycamore products enable network operators to lower overall network costs, increase operational efficiencies, and rapidly deploy new revenue-generating services.

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