# Medical Diagnostic Testing Company Optimizes Network Health

**Network visibility increases resilience to directly benefit network-centric point-of-care delivery of medical test results.**

| EXECUTIVE SUMMARY |
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| **MEDICAL DIAGNOSTICS TESTING COMPANY** |
| • Healthcare |
| • Headquarters in the U.S., with international operations |
| **BUSINESS CHALLENGE** |
| • Avoid network issues that could disrupt or delay time-critical, life-affecting treatments |
| • Adopt proactive network management |
| • Facilitate better network planning, and better align the network to the business needs |
| **NETWORK SOLUTION** |
| • Engage Network Optimization Service, including Smart Analytics |
| • Engage SMARTnet and High-Touch Operations Management Services |
| **BUSINESS RESULTS** |
| • Rapid identification of issues that could affect the network |
| • Cost-effective augmentation of skill sets and tools with expert assistance |
| • At-a-glance visibility of the overall state of the network, resulting in fewer TAC cases and more efficient network management |

## Business Challenge

The management and staff at a major medical diagnostic service company take seriously their critical role in the lives of patients. The company operates an extensive clinical testing network that spans three continents. More than half a million patients each day gain insights from the company's services, and approximately half of the physicians and hospitals in the United States rely on the company's testing, information, and services.

As a customer-focused business, this diagnostic testing company is committed to innovation and seeks creative ways to improve patient care and deliver more value to the healthcare providers and the hospitals that it serves.

The company's rate of growth has posed challenges for the network engineering team that must integrate and manage its large-scale infrastructure. The network undergirds the company's online-centric delivery of diagnostic results at the point of care. Multiple corporate acquisitions have increased network complexity, and therefore further complicate network management.

## Network Solution

As a first step, the diagnostic testing company improved responsiveness to network issues by taking advantage of the Cisco® High-Touch Operations Management (HTOM) Service. The introduction of a designated Cisco operations manager complemented the company's use of Cisco SMARTnet® Service. "The combination of SMARTnet and HTOM services allowed us to more rapidly resolve issues," says the company's manager of network engineering. "Our Cisco operations manager helped us better monitor the network, and control issues as quickly as possible."

With efficient monitoring and issue resolution processes in place, the networking engineering team next aimed to introduce proactive measures. The company again turned to Cisco Services, and a Cisco Network Optimization Service engagement transformed their infrastructure network management with a proactive approach.

"As the network expanded to 1600 devices and more than 200 versions of IOS, we had to look for ways to improve visibility and get ahead of issues that could potentially impact service delivery," says a senior engineer in the network engineering team. "We needed to gain more insight into the various device configurations and status."

"We wanted to get ahead of issues and be able to more wisely manage our engineering resources," says the network engineering manager. "With the Network Optimization Service engagement, our Cisco engineer gives us insights into our network that allow us to avoid *future* issues."

The Network Optimization Service engagement also gave the diagnostic testing company early access to the newest network performance analytics capability. Consisting of an automated network improvement plan, the capability is delivered through Cisco's smart analytics portal. Network performance analytics helps the company improve compliance with policies and best practices and better prioritize resources utilization by quickly identifying exceptions.

The service's holistic view of the network draws on current hardware, software, security, and syslog data. The network engineering team can now measure and track network health and compliance over time, as content is refreshed with each upload to Cisco's secure, proprietary network data collector.

"Network performance analytics lets us view our network health every day, and gauge our progress against the Network Optimization Service quarterly reports and recommendations," says the network engineering manager. "The tool brings it all together; it outlines the areas of unhealthiness and allows us to define the required resources. We can use it to more clearly communicate necessary plans to management, and it shows them the consequences if we were not to take action."

Network performance analytics also facilitates the company's efforts to adopt Information Technology Infrastructure Library (ITIL) best practices. "This tool allows us to identify areas of risk and then shows us how to bring those areas in line with industry best practices," says the manager. "In terms of fitting into our lifecycle management, network performance analytics seems to have been built with ITIL management in mind; it aligns with ITIL very nicely."

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>
> **– Manager, Network Engineering, major provider of medical diagnostic testing services**

Because it improves the visibility of network activities and practices, network performance analytics is also being evaluated for the potential to help streamline compliance efforts. "Compliance involves many audits, and requires that we demonstrate various measures that are being taken to tighten security," says the network engineer. "Network performance analytics, with its report-generation capabilities, could be very useful for future audits."

## Business Results

The introduction of Cisco Services has changed the way that the network engineering team operates today. The Network Optimization Service, in particular, has helped improve the team's productivity and given the company a more resilient network. They now have a roadmap for future enhancements that optimize the alignment of the network to the business needs.

"When we first engaged Cisco services, we weren't looking deeply enough," says the network engineering manager. "The Network Optimization Service engagement showed us specifically where we needed to improve network health. Over the next couple years, the service gave us the tools we needed to become much more proactive, reduce our Technical Assistance Center (TAC) cases, and mature our network management processes."

By providing visibility and simplified reporting, network performance analytics contributes to better decision making. Network engineering can present management with detailed cost projections, and justify the required resources and investments to get the best returns on investments in the network. The manager explains, "Network performance analytics helps us identify areas that need improvement, and articulate resource needs to address them. Working hand in hand with our Network Optimization Service team, we know we can efficiently address those areas that will boost our network health."

Knowledge transfer has been a significant benefit of the services engagement. Like any IT organization, this network engineering team needs to keep up to date with a broad range of technology and process advancements. "There are always gaps in skillsets that must be filled," says the groupls manager. "Network Optimization Service, and the new network performance analytics, filled a very important gap for us in terms of gaining network visibility.

| SERVICES LIST |
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| **Cisco Services** |
| • Cisco Network Optimization Service, including network performance analytics |
| • Cisco SMARTnet Service |
| • Cisco High-Touch Operations Management Service |

And today, the web-based dashboard puts the functionality and advantages of Cisco Services at our fingertips. Online access means that we can receive reports faster."

Perhaps the most significant result of engaging Cisco Services goes back to the original need for faster issue resolution. Today, Cisco support service requests are typically resolved in less than a day and the Network Optimization Service team frees the network engineering team from monitoring the service requests. "With Cisco Services on board, the number of service requests is much more manageable, and those we do have are resolved very quickly," says the manager.

"That alone has brought value to our company, especially during critical acquisition phases. Our Cisco Services engineer makes sure that best practices violations are quickly identified and addressed in any new networks we inherit. This has kept the number of priority-one service requests to a minimum. Since engaging the Network Optimization Service, we have only had to open two or three new priority-one service requests per year. For a huge network like ours – with thousands of devices – this is excellent."

## For More Information

To learn more about Cisco Focused Technical Service, visit: http://www.cisco.com/go/fts

To learn more about Cisco Network Optimization Service, visit: http://www.cisco.com/go/optimize

To learn more about Cisco SMARTnet Services, visit: http://www.cisco.com/go/smartnet

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