University Greatly Simplifies IT Operations Management

George Mason University uses Smart Net Total Care Service to inventory and track IT assets.

EXECUTIVE SUMMARY

George Mason University
- Industry: Higher Education
- Location: Northern Virginia, USA
- Number of Students: 33,320

CHALLENGE
- Conduct detailed, accurate network device inventory
- Reduce mean time to problem resolution
- Simplify IT operations management

SOLUTION
- Cisco Smart Net Total Care Service

RESULTS
- Conducted network inventory in hours instead of weeks
- Reduced mean time to resolution by approximately 30 percent
- Simplified maintenance

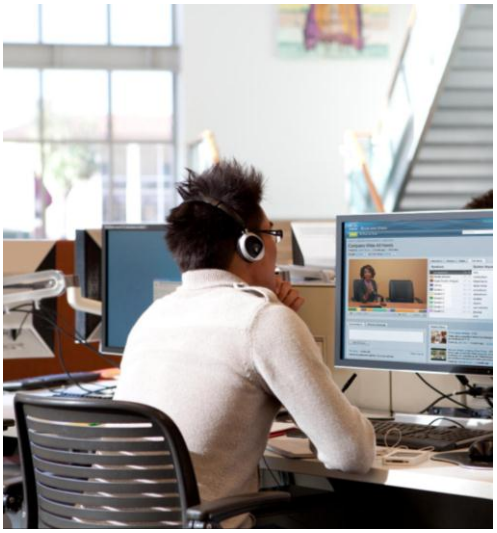
Challenge

George Mason University prepares hard-working students for 21st century careers through excellent teaching combined with cutting-edge research. The school was ranked in the top five "Up-and-Coming Institutions" by *U.S. News & World Report*; in the top 200 by the Academic Ranking of World Universities; and one of the top 100 "Best Values in Public Colleges" by *Kiplinger's Personal Finance*.

Student, wireless, academic, and management networks support George Mason University's teaching and research mission. With approximately 2400 devices, including switches, routers and wireless access points, deployed over a Multiprotocol Label Switching (MPLS)-based network that spans three campuses and numerous other remote locations, the network support organization has a lot of equipment to track and maintain.

Virginia state institutions, such as George Mason University, are required to conduct an annual equipment inventory. George Mason has an inventory tracking system in place that performs a portion of the task, and IT equipment chassis are barcoded. However until recently, verifying the barcode, location, cost, installed software, and other attributes of each item was a labor-intensive process. An employee would have to visit every wiring closet to identify the equipment it contained, confirm the location, and verify the barcodes. Gathering initial data took approximately four weeks. Data was brought back to the network support group and compared to the data in the tracking system. Inconsistencies had to be researched further, adding time to the process.

> "With the inventory management, reporting, and other functions available to us now, we have one place to go to see all of our equipment. We can simplify upgrades, avoid the risks associated with outdated code, monitor only the alerts that matter to us, and do it all in just minutes. What a difference."
>
> **– David Robertson, Service Delivery Manager Network Engineering**



Although IT could identify equipment chassis, it had no way to easily add useful information to the existing tracking system, such as associated blades, serial numbers, service contract coverage and contract numbers, relevant alerts, or software versions. In addition, “rogue” servers or routers were often deployed by campus departments, in violation of a University Policy to notify IT. Network upgrades or software changes could easily disrupt these unknown devices, triggering complaints from the department to IT, who then had to spend time troubleshooting and adding the device to the catalog.

If there was a problem with a device, the network support team would contact the Cisco Technical Assistance Center (TAC) for assistance and reference the appropriate Cisco SMARTnet contract. However, with more than 15 separate contracts covering various classes of equipment, it took time to identify the correct associated contract. This delayed troubleshooting until the correct contract number could be found.

Solution

“We needed a way to bring all of our network inventory data together to save time and improve operational efficiency,” says David Robertson, service delivery manager of network engineering for George Mason University. “When Cisco Smart Net Total Care Service became available, we recognized the value that it could deliver to our team.”

Cisco® Smart Net Total Care Service provides the university’s Network Engineering team with smart service capabilities that deliver actionable intelligence and proactive support to increase operational efficiency and reduce risk. Smart Net Total Care Service integrates extensive inventory management and analysis, customized security alerts, and proactive diagnostics.

For the Network Engineering team, Smart Net Total Care Service brought together all of the university’s Cisco networking equipment inventory data in one place. Network-wide intelligence and customized recommendations from Cisco help increase operational efficiencies and reduce the time, effort, and expense of managing the university’s networks. The ability to validate service levels and status of Cisco products makes it fast and easy to ensure that the proper service contracts are in place. Accessing correct support contract information takes seconds, as opposed to hours, making device serial numbers easily available to facilitate TAC interactions.

The Smart Net Total Care web portal provides a secure environment to access, review, modify, and download reports. In-depth reporting enables the team to assess equipment risk factors, such as End-of-Life or End-of-Service status, and simplify upgrade planning and compliance.

Results

Smart Net Total Care Service delivers only the hardware and software alerts and notifications that apply to the specific Cisco devices in the university’s IT infrastructure. Targeted alerts significantly reduce the time needed to review information and take appropriate action.

“Having my inventory in one place with service contract numbers, software versions, and alert data makes maintenance so much simpler,” says Robertson. “For example, I can see the code level of my Cisco Catalyst 4500 Series switches, see if there is an alert, and then act accordingly. We know immediately what we need to do.”

Cisco Smart Net Total Care Service also enhances network operations' effectiveness and accuracy. With in-depth records on every Cisco device in the network, Robertson knows exactly how many devices there are and where each is located. Instead of constantly tracking a 200-line spreadsheet, Robertson keeps a short list of equipment waiting for installation. When it is installed, it is entered into the Smart Net Total Care database.

The Smart Net Total Care Service also expedites service restoration and increases uptime. The university's equipment naming scheme designates where the equipment is installed. In the event of a problem, a technician can quickly locate the device and scan the device barcode, which correlates the serial number of the device with the information in the Smart Net database to instantly provide the details needed to engage support services, including service contract and level of coverage information.

"Now our technicians know exactly which service contract covers a piece of equipment," says Robertson. "On the rare occasion when we call the Cisco TAC, we have all of the information needed. We have reduced mean time to resolution by approximately 30 percent."

Inventory reporting is also much faster. Robertson can view all of his equipment through the portal and instantly obtain the details about any specific device. He estimates that during inventory reporting, Smart Net Total Care inventory features save him approximately 10 minutes per device. With hundreds of devices to inventory, he now saves hours and even days of time. For technicians conducting physical inventory, if a device cannot be located in the field, Robertson can direct them to the exact location of the device. If a barcode tag has fallen off, it can be re-coded and the system updated to reflect the correct location.

Tracking additions, moves, and changes is also much simpler. Sometimes a piece of equipment shows up in the inventory that Robertson's team did not purchase. Usually the new equipment was deployed by another group at the university. In these cases, Robertson's team can talk with the group, identify and catalog the equipment, and capture the information about the device for future troubleshooting and maintenance on the portion of the network they manage. For example, in the past, when the device owners had a problem with a device, they would contact the network support group for resolution. Without knowing what was installed, troubleshooting was hindered and time to resolution extended. Now, once correct device data is entered into the Smart Net Total Care inventory, issues can be managed promptly and accurately by Robertson's department.

Maintenance is simplified because the team can see everything in the inventory stock at once and create a maintenance list in a few hours as opposed to weeks. For example, as the university expands its deployment of Power over Ethernet (PoE) devices, Robertson can see at a glance which Cisco Catalyst 4500 Series switches have non-PoE blades that need replacing.

PRODUCT LIST
Routing and Switching
• Cisco Catalyst 6500 Series switches
• Cisco Catalyst 4500 Series switches

The equipment purchasing process has also been improved, Robertson observed, “SNTC allows me to see what equipment will need to be replaced when due to end-of-life or end-of-service issues, so I can proactively schedule replacement purchases and deployments. This allows me to start planning for future fiscal years and forecast budgets better.”

Next Steps

George Mason University’s IT organization is only beginning to use this tool. Robertson plans to use the advanced visibility into network assets to standardize code and software updates, expand change management capabilities, and automate configuration-checking.

“With the inventory management, reporting, and other functions available to us with Smart Net Total Care, we have one place to go to see all of our equipment,” he says. “We can simplify upgrades, avoid the risks associated with outdated code, monitor only the alerts that matter to us, and do it all in just minutes. What a difference.”

For More Information

To find out more about Cisco Smart Net Total Care Service visit: www.cisco.com/en/US/services/ps2827/services_genericcontent_nlssurvey.html.

To learn more about George Mason University, visit www.gmu.edu.

This customer story is based on information provided by George Mason University and describes how that particular organization benefits from the deployment of Cisco products. Many factors may have contributed to the results and benefits described; Cisco does not guarantee comparable results elsewhere.

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