

University of Minnesota Uses Entuity to Strategically Manage and Upgrade Complex Network Environment



Founded in 1851, the prestigious University of Minnesota is one of the most comprehensive public universities in the United States. It is a premiere research university with faculty of national and international reputation, providing a strong tradition of education and public service.

Overview

Entuity managed the successful upgrade of University of Minnesota's infrastructure. Entuity's integrated performance, fault and inventory management, reporting capabilities and extensibility minimizes the number of tools University of Minnesota requires, so helping to manage costs and deliver services more effectively.

Business Needs

The University of Minnesota is dedicated to teaching and learning, research and discovery, and public engagement. The University serves more than 70,000 students and faculty. It offers degrees in more than 370 fields of study through its four campuses (Twin Cities, Duluth, Morris, and Crookston), a collaborative center in Rochester, extension offices, and research and outreach centers.

Keeping its distributed community well-connected 24x7 is vital to the University's Office of Information Technology (OIT). OIT's Networking and Telecommunications Services (NTS) group operates and manages the Twin Cities campus network. It provides front-end voice, data, and video communications services, including telephone and data connections and remote access services.

"The ability to integrate leading edge emerging technologies into our network infrastructure to support and improve it for future growth and sustained availability is crucial," states Pete Bartz, Manager Data Network, Design and Operations within the Networking and Telecommunications Services group. Reliable access to the network for its entire community helps the University in its overall goal of providing premier research and educational services. An in-depth review of the University's existing infrastructure highlighted that the Twin Cities campus data network, installed in 1997, had outlived

its life expectancy of five years. “We were hitting a ceiling – we could not easily extend and add new technologies and services to the network to effectively support our community,” explains Bartz.

The NTS group determined a major upgrade of the Twin Cities’ campus network infrastructure was required. With a distributed and expanding network that already included 150,000 ports, the NTS group also determined it required a more effective and proactive means to monitor and manage the upgrade to a new network. The NTS group developed a detailed Request For Proposal (RFP) for the network upgrade, including a thorough section on network management, to replace the outdated systems.

The Solution

Through its extensive RFP scoring process, the University chose new equipment – Cisco 6500’s for the border, backbone and core infrastructure, and over 2,200 Cisco 3750 switches across 300 buildings for the distribution and edge devices.

The NTS group also evaluated several network management tools. Entuity was selected based on its scoring performance against the RFP.

“We needed network monitoring and management that could easily handle our complex, changing environment,” states Mike Faust, Design Engineer. “Entuity scored the highest in our RFP evaluation. Entuity integrated performance, fault and inventory management, reporting capabilities and extensibility helped it attain a leading score.”

“Entuity satisfied our network management system requirements and did so all in one solution. Entuity minimizes the number of tools we need, helping us to manage our costs and deliver services more effectively,” explains Pete Bartz.

Also critical in the University’s RFP scoring evaluation is that Entuity consolidates and correlates three operational disciplines using a centralized repository, a powerful analytics engine, presentation and notification and unprecedented reporting. The convergence of different types of information allows Entuity a unique understanding of network events, changes in network usage and their impact on a business. Entuity provides:

- Performance Management, using Service Degradation Sensitivity to predict problems so infrastructure managers can take action before users notice
- Availability Management which distinguishes between network, server and application faults and then reports the True Cause along with its business implications
- Resource Management, offering a full inventory of IT infrastructure assets and what they are connected to. Included is a Spare Ports Report that saves costs in just hours after implementation

The According to Bartz, Entuity was also selected for its RFP scoring on the following features and capabilities:

- **Extensibility:** The University's network constantly changes as new technologies are added, such as BGP, VPN and new security firewall services. Entuity is easily extensible and configurable to quickly add these components to monitor and manage them. The University plans to 'tune' Entuity to collect the specific information needed to improve the management and operation of the entire network
- **Ease of use:** Entuity requires less overhead, administration and maintenance. Infrastructure discovery is up-to-date and information is quickly available. Entuity provides a distributed view down to the object level (device, port, WAN link, etc)
- **Reporting:** Entuity's reporting offers access to important statistical data, providing for proactive network management and the ability to extend information to all customers
- **Rapid implementation and out-of-the-box flexibility:** Entuity is quickly installed, up and running and collecting network data within a few hours

Summary

Using Entuity, the University of Minnesota's met its network goals to:

- Proactively manage network and connections and provide more reliable community support
- Leverage inventory management and statistical reporting; determine resource limitations to improve network utilization
- Use impact analysis; understand the impact of changes and forecast future needs
- Identify and address collisions and blockages with effective fault management
- View previously hidden edge port conditions; communicate to departments and fix problems
- Retire home-grown systems
- Prevent service problems from developing

For more information on Entuity Network Analytics visit: entuity.com.