TEXAS WOMAN'S UNIVERSITY
Case Study

Texas Woman's University is the nation's largest public university primarily for women. Its campuses in Denton, Dallas and Houston are joined by an e-learning campus offering innovative online degree programs in business, education and general studies. TWU prepares students for leadership and service through high quality undergraduate, graduate and professional programs on campus and at a distance.

CUSTOMER
Texas Woman's University

WEBSITE
twu.edu

INDUSTRY
Education

At a glance:
A major, multi-campus U.S. public university

Situation:
TWU needed better control and increased flexibility for a variety of network administration tasks

Solution:
The Men & Mice Suite

Enabling a more flexible, reliable and secure network at Texas Woman's University

As the network administrator for Texas Woman's University, Tommy Walker was responsible for the IT Network uniting three physical campuses, as well as an ever-growing e-learning campus. Faced with the challenge of managing an infrastructure that was growing in both size and complexity, Walker wanted to make a change to open source technology. He chose Men & Mice to help him accomplish his goals. "Our main campus in Denton, Texas, has 21 networked buildings. Including the Houston and Dallas campuses, we have more than 400 switches and an equal number of wireless access points. Men & Mice made an immediate difference. It was quick to install, simple to use, and easy to customize—and it positions us well for the future," said Walker.

Managing the transition to open source DHCP "a major selling point"

"I am a proponent of open source technology," said Walker, "and converting to Linux had been on my list of goals for a long while. I'd built a test Linux DHCP server, but I ran into some difficulties modeling the database migration." So Walker did what any network administrator might do: he went looking for help online.

"Basically I was trying to convert things cleanly and completely from Windows to Linux, and I was looking for a tool that would help me do that. I posted my needs on message boards and got a recommendation from another network administrator: Try Men & Mice." Not only did it help TWU with the transition to Linux, but Walker adds, "I was able to get much better control over my Windows DHCP server right away. We are now running all of the DNS servers through the Men & Mice management console, as well. I am very happy with it."

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Enabling disciplined IPAM at TWU: "Men & Mice really simplifies the management piece"

IP addresses are critical elements of any network, especially that of a university. In order to be accessed, every printer, workstation, tablet and smartphone (not to mention applications like email, web access and file storage) requires an IP address assignment. Serving more than 15,000 students and faculty required tens of thousands of IP addresses—and that number was only growing. "I'd been keeping track manually on a spreadsheet, and that situation was eventually going to cause us trouble."

Managing IP addresses is an increasingly critical function for any large organization—especially a distributed one. As VoIP, mobile networks and emerging technologies expand IP address assignment demands, networks will require more agile management, planning, portioning, tracking and reporting of IP addresses, known collectively as IPAM. By applying sound IPAM principles, network administrators can plan and manage IP traffic in real time. Any IPAM solution must integrate DNS and DHCP server management, because DHCP assigns the IP addresses that people and machines use to access the network, and proper DNS lookup ensures network users can find what they need quickly and accurately.

TWU had used Windows DHCP "for years," said Walker, a 12-year veteran of the university's Office of Technology. "We'd often have issues pop up that made me wish I could have a better look into our DHCP server. I thought if I could see what was going on in real time, I'd be able to be more granular with access." The Men & Mice Suite is an overlay solution that, among other things, enables TWU to easily see how many IP addresses are available and who is using them. Whether it's Microsoft Windows or any other platform, Men & Mice software gives administrators a single pane of glass to manage DNS, DHCP and IP addresses without having to replace any existing hardware. In addition to the daily tasks of keeping the network available and running well, management through the Men & Mice Suite consolidated UI makes it simple to identify and insulate the network from possible security breaches, and helps to prepare network teams for future challenges associated with the adoption of IPv6 and DNSSEC.

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Resolving TWU's DNS and PTR problems offers "tremendous time savings"

Men & Mice features a robust Application Programming Interface (API) that enables clients like TWU to extend the software's "out of the box" capability with custom scripting and solution extensions. "Customers use the solution to automate standard processes and simultaneously remove the possibility of human error in repetitive tasks." Not only will the automation save time, but it also ensures that specific policies and protocols are followed properly every time. TWU is a case in point. "The ability to write scripts and customize tasks has been a significant benefit so far," said Walker.

As any network administrator can attest, when users can't access the Internet or read their email, or they experience any other IT-related problem, Walker's office gets a call. "We are viewed as kind of a catchall, so one of the biggest challenges is to help people resolve their problems on the network. And of course DNS is a major component." DNS is the glue that holds the network together. "Imagine your web experience if you had to remember the numerical IP address of every website you visit. DNS simplifies life online, but if it's misconfigured, it can cause serious problems."

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- Tommy Walker, Network Administrator
Texas Woman's University

One of TWU's programmers had written custom code that was incorporated into the university's main webpage in order to simplify the way techs made DNS entries. "It was a double-edged sword. Using this code, we could allow techs to interface with the DNS very simply, in a limited way. However, that code interfered with our ability to manually make entries on the reverse zone for the particular zone they needed to access." In short, it was good for the techs but bad for administration. When Walker had to make more complex changes, "I had to manually take the item off-line and disable the code in the script, which made the process more challenging and time consuming than it should have been. Now Men & Mice takes care of that automatically. It's been a tremendous time savings."

Walker's department depends on the on-site client services support staff to install computers and printers for faculty and staff and demand for their support is great. "Several staff members have to be able to make DNS entries, and I'd rather they do it from an interface like Men & Mice, where it's much easier to control access to what they can change in DNS. The alternative is to give everyone command line access to my servers, which creates the potential for major problems if there is a mistake. So the techs are

using the tool regularly, and using it very well."

The DNS coding issue is not the only problem the Men & Mice Suite has resolved for TWU. "We had ongoing issues with stale pointer (PTR) records." Also called reverse DNS records, PTR records map an IP address to a hostname. "Our client services group was having trouble in our Mac labs specifically, with stale PTR records. They would remote desktop into a particular Mac, but would end up in a different computer. This is directly related to stale PTR records. Men & Mice has incorporated a cleanup tool that works very well. It allows me to do a great deal of PTR cleanup with minimal effort."

The results: "A significant benefit for me"

From a user perspective, networks are working when they are invisible. If users can access the resources they want, when they need them, the network is fine. From a network administrator's perspective, success can be measured in a number of ways, and for Tommy Walker and the TWU Office of Technology, one of the most meaningful measures is user satisfaction. "We are here to facilitate people's education. Our students are here to better their lives, and we are here to support them. It's an important mission, and when technology problems interfere with that, people will let you know quickly. Since we installed the Men & Mice Suite, I haven't heard a thing."

About Men & Mice

Headquartered in Iceland, with operations in the U.S, Europe, and Asia, Men & Mice is a global company dedicated to developing integrated DNS, DHCP and IP address management software solutions. Men & Mice also provides DNS and DHCP appliance-based solutions in virtual or hardware format, as well as offering training and consulting. We are the world's leading provider of DNS, DNSSEC and IPv6 training courses in cooperation with ISC.

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