The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

LOCATION:
Honolulu, HI, US

YEAR:
2011

STATUS:
Laureate

CATEGORY:
Human Services

ORGANIZATION:
American Foundation for the Blind

ORGANIZATION URL:
http://www.afb.org

PROJECT NAME:
Network QoS

PROJECT OVERVIEW

The American Foundation for the Blind Today, delivering a quality Internet experience is an essential service of the American Foundation for the Blind (AFB). In addition to providing information and web-based services, AFB also provides technical consulting and conducts evaluations and tests of many specialized technologies, products, and services for the blind and visually impaired. Centralization for a Decentralized staff AFB maintains multiple offices including its headquarters in New York City and many of its approximately 65 employees regularly telecommute from their homes across the country. Providing a consistent "in-office" feel for all network users regardless of their location or degree of visual impairment required a significant shift in IT operations and the network architecture. AFB used to outsource all of its WAN administration, but today it manages its entire network internally from its New York City headquarters with additional technical and backup services in West Virginia. Product and Service Testing The previous managed services arrangement did not support the flexibility and response times AFB needed. Network change orders typically took weeks or even months to implement, making it nearly impossible to conduct network-related product and services testing. AFB realized that to meet its own standards of accessibility and network quality meant managing them entirely in house, even with its small budget and three-person IT staff. Many of AFB's primary network applications such as Internet access, VoIP, file sharing, and office applications are much like those found in a typical business network. Where AFB's network differs significantly is its extensive use and support of assistive technologies and remote desktop applications for the blind. Many AFB staff members are blind including CEO Carl R. Augusto. For computer and Internet access, perhaps the most essential assistive application AFB supports is screen reading software that converts text to audio. These applications are bandwidth, processor, and latency sensitive especially when used with a remote desktop application. Hernandez and the IT staff make screen reading assistive workstations available for staff and visitors throughout the AFB offices as well as to remote users and telecommuting staff. Project: Enhancing Quality of Service With the help of

an IT consulting company, AFB Systems Engineer Roberto Hernandez completed the network migration three years ago but it hasn't been a trouble-free experience. In terms of network performance, VPN access was often very slow and VoIP call quality and jitter could be "horrendous" at times and it was nearly impossible to troubleshoot. Hernandez began a quest to fix the quality of service (QoS) on his network and acquired LiveAction software from ActionPacked! Networks. During an initial QoS audit using LiveAction to inspect the policies in his AFB routers, the software immediately revealed that the consulting company he used had failed to turn up QoS in two of the routers, accounting for some of the major performance problems his network was suffering. Perhaps the best benefit Hernandez has seen after upgrading his network's QoS was the immediate improvements in network consistency and quality of experience for its blind users.

SOCIETAL BENEFITS
This project helps ensure that the blind and vision impaired receive the high quality of Internet access that many of us take for granted.

PROJECT BENEFIT EXAMPLE
Perhaps the best return Hernandez has seen from this project is the initial improvement in network consistency and quality of service for its users. Hernandez expects this to continue to improve dramatically as he gains more experience with the software used for this project.

IS THIS PROJECT AN INNOVATION, BEST PRACTICE? Yes

ADDITIONAL PROJECT INFORMATION
I have not notified the AFB about this nomination yet since they may consider this just part of their normal work. However their tireless determination and tenacity to bring enabling technology to the blind is very inspiring for me and they deserve recognition for their persistence and use of innovation to make this happen.