Business Solutions

A COMBAT-READY NETWORK: ARMY WAR COLLEGE DEPLOYS CAMPUS-WIDE NETWORK

A combat-ready network

The Army War College has deployed networking solutions to deliver training applications with real-life war environment, in preparation for future warfare. by Minu Sirsalewala, Network magazine

The Army War College (AWC) at Mhow, Madhya Pradesh, is one of India's leading training institutes for officers of the Indian army. It prepares one to handle the strategic and tactical tools of warfare. The Army War College has deployed networking solutions like LRE (Long Range Ethernet) to enable training applications through the use of technology aids like smart cards, video conferencing, e-books, interactive whiteboards, video projection systems etc. The college wants to provide its students with real-life war environments of the future through real-time training modules

In a nutshell

The Company

Army War College at Mhow, Madhya Pradesh is one of the premier training institutes of the Indian Army. It prepares officers of the army on the strategic and tactical tools of warfare.

The need

The college wanted to provide the best training applications to their students to prepare them for future wars and war exercises. For this it needed to exploit the latest networking technologies.

The solution

Cisco's LRE broadband solution extends the reach for traditional Ethernet from 100 meters over normal (copper) lines to up to 1500 meters.

The benefit

The network provides converged voice and data to a distributed population on the campus. The campus has WAN connectivity with services like e-books, OLAP, LDAP based smart card systems, server farm, IP-based video conferencing, learning labs and host of other programs.

About two years back AWC-Mhow realized the need to enhance and optimize training utilizing the potential of IT and related tools. "The very first step to address this need was to network our campus," says Col S.P. Kochhar VSM (Sigs and IT), Army War College

The 'Works'

AWC-Mhow has introduced a number of new technologies and innovative applications on its campus in the past one year. It undertook a communications infrastructure upgradation exercise aimed at making the campus one of the most advanced ones in India. AWC had considered xDSL solutions from various vendors before finalizing on Cisco. The college now has a gigabit fiber optic network with a Cisco Catalyst 6500 layer 3-core switch and Cisco Catalyst 3500 layer 2 edge switches. These are coupled with Cisco's network management solution and LRE solution, and VSAT-based Internet and leased lines for wide area connectivity.

The college has a thin client stand-alone network to provide classified material to authorized personnel in controlled and secure environments. The college campus has implemented a converged voice, video and data solution to provide Internet access and training applications to over 300 users at the college offices, instructional area and residential quarters within the campus, Mhow.

Connecting the campus

Maheshwari Computers carried out the implementation at the campus that was spread over a period of five months with back-end support provided by Tata Infotech and Cisco.

"Since the design involved some first time concepts/installations, implementing the solution did throw up several challenges. This being the first time, there was no precedent to fall back on. The widespread physical layout of the campus too proved to be a daunting task for the implementation process. However, we did our research and came out with designs that have now proved successful," explained Col Kochhar.

Post implementation

One reason for selecting LRE was the simplicity of the CPE (customer premise equipment) coupled with the bandwidth delivered, and manageability features.

"We avoided solutions that have a high overhead in terms of common equipment and/or management/administration. Except for some hardware failures no major problems have been faced since acceptance of the installed system," said Col Kochhar.

Applications and services on the network

There is a layer 3 end-to-end fully managed network. The network provides converged voice and data to a distributed population in the campus, which consists of buildings that are widely separated and outside Ethernet range. The network also provides WAN connectivity, Web services, e-books, OLAP, LDAP based smart card systems, server farm, Net purchases, IP-based video conferencing, learning labs and a host of office automation programs.

Benefits

The college can now provide adequate bandwidth and converged services to students and instructors on a 24x7 basis. This has helped to make the training more realistic and meaningful.

- **Future war fields have been effectively created to prepare students for real-life future encounters.**
- **Smarter training aids like docking stations, interactive white boards, and video projection systems for every classroom.**
- **Internet access at speeds of up to 15 Mbps for AWC's staff and residents by means of a LAN connecting labs to a VSAT-based line.**
- **Enterprise-wide smart card systems aimed at providing graded access and other multifarious services to authorized personnel like analysis data and reports.**
- **The network has helped spread the culture of automation and use of facilities like multi-point videoconferencing and e-books which has enhanced the quality of research.**
- **Optimal multi-tier security solutions (including biometrics and digital identities).**

"The campus is justifiably proud of using the latest and relevant peripherals that aid in training. AWC had decided on a time bound plan to introduce IT on the campus not only to aid in training, but also to provide decision support systems akin to those that will be existing in the future environment. The benefits are already visible and the college intends to continue to grow its IT infrastructure," said Col Kochhar.

Future plans

Efforts are being made to exploit the facilities provided and the projects continue in consonance with the vision. "There are major plans for expansion. Plans include extending the converged network to all student residencies; converting large volumes into e-format; installing surveillance networks; introducing knowledge based expert systems; introducing IPV6, and more," expressed an elated Col Kochhar.

The college has also appointed an on-site engineer to manage all key projects coupled with centralized end-to-end management, Intrusion Detection System (IDS), proxies and firewalls.