

CONNECTED CAMPUS

THE UNIVERSITY OF JAMMU UPGRADES ITS NETWORK TO GIGABIT ETHERNET AND IS NOW ABLE TO OFFER CAMPUS-WIDE INTERNET ACCESS.

The University of Jammu was founded in 1969 after the former University of Jammu and Kashmir was split in two. A premier educational institution in the state, it attracts students from all over North India and has established a reputation for academic excellence. It has been given a four-star accreditation by the National Assessment and Accreditation Council of India.

When it first started out, the university had 11 teaching departments at post-graduate level. Now, there are 23 teaching departments offering Masters and Doctorate degrees in various disciplines. Undergraduates attend affiliated colleges. Currently, there are around 750 regular students who attend the university and about 200 distance-learning students.

THE CHALLENGE

PROVIDING CONVENIENT YET SECURE INTERNET ACCESS TO THE UNIVERSITY'S STUDENT AND STAFF FROM ANYWHERE ON THE CAMPUS WAS THE KEY OBJECTIVE.

While the University is one of India's top academic institutions, it offered only limited access from very specific locations within the campus. Only four of the 23 departments had Internet access – the Department of Computer Science and the Department of Physics were joined by a Local Area Network (LAN) and shared a 64Kbps Very Small Aperture Terminal (VSAT) connection. The Department of Administration and the Department of Bio Sciences used dial-up and Integrated Services Digital Network (ISDN) links. No other departments had Internet access

In addition, the University had two centralised Internet laboratories, one at the Department of Computer Science and the other at the Department of Library Sciences. These labs were primarily created to provide Internet access for students and research scholars.

Because the campus sprawls over some 3 sq km, having Internet access in only a few locations meant that it was not easily accessible to students and staff. They would have had to travel to these departments or laboratories to go online.

Said Professor G. S. Sambyal, IT Cell Head at the University of Jammu, "Our main objective was to enable the free flow of information among the University community. We wanted secure campus-wide Internet connectivity so our students and staff could share resources, journals and research work, and access the vast academic resources available on the Internet."

The University needed a technology partner with experience deploying similar technology elsewhere.



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THE SOLUTION

THE UNIVERSITY PICKS CISCO FOR ITS END-TO-END SOLUTION AND SECURITY OFFERINGS.

The University looked at various options and eventually decided on Cisco. Said Prof Sambyal, "The end-to-end connectivity solution including firewalls and Intrusion Detection Systems (IDS) made us to choose the Cisco solution."

This consisted of a 1 Gbps fiber-optic backbone with Cisco Catalyst Series at both ends. The central switch is a Cisco Catalyst 4500 Series Switch with the Redundant Supervisor IV engine and Redundant Power Supply to ensure maximum availability. The network terminates with Cisco Catalyst 2950 Series Switches at the edge.

The University also deployed the Cisco PIX 525 Firewall. This provides enterprise-class, integrated network security services, including stateful inspection firewalling, protocol and application inspection, virtual private networking (VPN), in-line intrusion protection, and rich multimedia and voice security. It also deployed Cisco's Network Intrusion Detection System 1245 for internal threat monitoring.

The whole university is now connected to the Internet through a 1 Mbps VSAT connection.

A SECURE END-TO-END CISCO SOLUTION WAS DELIVERED TO THE UNIVERSITY QUICKLY AND SUCCESSFULLY.

Wiring up the university was not easy, but Cisco and Spark Technology and Testing Private Ltd completed the implementation successfully within four months. The new infrastructure was up and running by December 2003. Prof Sambyal added, "As a big campus with scattered departments, and also with new construction coming up, designing the network and laying cables was a challenge. However, the solution was delivered on time, on schedule to our complete satisfaction."



THE RESULTS

CISCO DEPLOYMENT IS FAST, RELIABLE AND COST-EFFECTIVE, AND PROVIDES THE UNIVERSITY WITH A NETWORK THAT CAN GROW.

The University of Jammu now has campus-wide Internet access. All departments now have Internet access and everyone can use email. Electronic journals can be shared easily because they can be accessed across the network.

Said Prof Sambyal, "Thanks to Cisco, we were able to wire up the campus very quickly, despite the large size of the campus. Our services to our users – the University community – have improved as a result of this

implementation. We are providing 24 hours Internet access to all the campus-wide users. It has saved us time and money and improved our resource utilisation. Our IT staff have also added to their skills set because of the knowledge transfer process.

"Now our faculty and students have access to email from their own departments. Productivity has increased and everyone is happier."

The University is now planning to rollout wireless connectivity for its hostels and faculty residence blocks. It is also considering offering video conferencing on the network.

THE UNIVERSITY IMPROVED ITS SERVICES TO ITS USERS, RESOURCE UTILISATION AND STAFF PRODUCTIVITY.



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