



CISCO ENTERPRISE SOLUTIONS

State-of-the-art unified network drives productivity at Mahindra & Mahindra

Mahindra & Mahindra Ltd (M&M) is the flagship company of the US \$2.59 billion Mahindra Group. The company's association with the automobile business dates back to 1945. Initially set up to make general purpose utility vehicles for the Indian market, the company extended its operations to agricultural tractors, light commercial vehicles (LCV) and farm equipment. Today M&M's automotive division has two main business units- the Automotive Sector which also includes three wheelers and the Farm Equipment Sector.

Over the years, the M&M brand of vehicles has come to represent high quality, durability, reliability, easy maintenance and operational efficiency. These qualities have won popularity for the vehicles not only among individuals, but also with institutions like the Indian armed forces.

The company has had significant success with the introduction of premium MUVs, like Bolero and Scorpio, in India and global markets such as Africa, Asia, Europe & Latin America. At M&M, a combination of engineering skill and constant innovation has won its products coveted industry awards for R&D.

The company currently employs 11,500 people, spanning 49 sales offices across the country and a network of over 780 dealers.

Need for an integrated network

Prior to 2001, M&M's automotive business ran on two separate networks - the plant network that connected 7 manufacturing locations via individual leased lines and the area office network that connected the corporate head office with regional sales and marketing offices. These networks ran in isolation of each other, till the company decided to merge the two.

The need arose when M&M was looking at tapping the export opportunity in markets such as Europe and the US. With an expected increase in business volumes, the company required a real-time end-to-end network that would provide immediate transparency into the company's complete order booking cycle and back-end supply chain infrastructure. As a proactive approach to the changing business landscape, connecting the two networks would result in a substantial increase in efficiency.

The merger of the two networks meant a significant increase in data transfer, mainly through SAP transactions and MS Exchange. The erstwhile plant network, comprising Hypercom routers, was unable to sustain the required 2 Mbps connectivity.

A mix of Hypercom routers (plant network) and Cisco routers (area office network) also posed a challenge in terms of compatibility, interoperability and managing the entire network. Other issues with the Hypercom routers included the lack of easily available trained manpower for maintenance and poor voice quality support, given its inability to relay Voice over IP.

Commenting on the situation is **Vijay Mahajan, Head IT Infrastructure & Facilities Management – Corporate IT, Mahindra & Mahindra**, "Governed by long terms business needs, we decided to tackle the complete IT infrastructure set-up at one go. With an end objective of establishing a unified network that would provide high speed connectivity, we realized the significance of partnering with a vendor that met our long term goals."

The Solution

Creating a unified network: Migration from Hypercom to Cisco

Being an IT driven enterprise, M&M prepared a blueprint to address the problems faced by the existing network infrastructure. After a thorough technical and commercial evaluation, the decision was taken to switch over from Hypercom to Cisco's unified network. Commenting on the transition, **XYZ, Cisco Systems** said, "We helped M&M completely overhaul their old Hypercom network and standardize the system on Cisco routers, providing new found benefits such as scalability, use of VoIP and better manageability."

Establishing a centralized architecture at reduced costs: Rolling out MPLS network

M&M connected its 4200 IT users across 7 manufacturing locations, corporate head office, marketing headquarters, 4 regional offices and 36 sales offices through a single network that was powered by Cisco routers. Cisco planned for a centralized architecture that met all of M&M's ERP requirements. The communication network was re-engineered to leverage the advantages of a single server environment. In place of multiple leased lines that existed before, M&M opted for a multi protocol label switching (MPLS) circuit. Not only did this bring down costs, but the network now provided sufficient bandwidth to meet the additional data transfer requirements.

Managing the network: Implementation of Cisco Works for LAN Management, NOC and Data center

Management of the network was also an essential part of the roll out. Using Cisco Works, the company was in a position to monitor its LAN on a real-time basis. This facilitated proactive decisions and better fault finding. To monitor and manage the network, a state-of-the-art Network Operations Center was set up at Worli. Additionally, for faster communication and information sharing, a Data Center with redundancy for power, network bandwidth and hardware was established at Kandivli.

Leveraging the network: Net Meetings, Video Conferencing, VPN

Harnessing the power of the network for meeting diverse communication needs, Cisco enabled solutions such as Net Meeting and Video Conferencing at select locations. Voice over WAN was also implemented at different locations including area offices, resulting in substantial savings in communication costs within the organization.

Cisco also helped implement Virtual Private Network (VPN) and Outlook Web Access to support mobile users in accessing the required information anytime and from anywhere, with complete reliability and security.

Benefits

With IT being an integral part of the company's business strategy, M&M invested in the best of breed technology solutions. As a result of the Cisco network, the business value achieved for M&M can be summed up as follows:

- Proactive business response- As a result of a centralized LAN management the company can respond faster to ever changing market dynamics thus enabling proactive business response
- Cost effective and better WAN management- The converged network was based entirely on Cisco solutions; hence maintenance was easy. The network was managed centrally by using Network Management Software (NMS) and a single agency. Fault finding and repair was faster, resulting in efficient network management. The Cisco network also ensured lesser maintenance cost per year and easy availability of trained resources.
- Data transfer at high speeds- Cisco network, allowing 2Mbps data transfer speeds, resulted in faster data transfer, thus reducing the turnaround time for decision making.
- Better voice quality- Cisco routers supported VoIP and M&M could now use voice over its network in applications such as net meeting and video conferencing, thus bringing down communication cost substantially.
- Easy upgradation- The Cisco network can be upgraded with ease and supports future network expansion plans. This made M&M's investment in network infrastructure future-proof.

Summing up the experience of working with Cisco, **Mahajan says**, "M&M has always believed in harnessing the power of IT to achieve excellence in business. And our partnership with the world's leading networking vendor is a step towards emerging as the country's best IT enabled enterprise."