ROAD MAP

MITSUBISHI MOTORS HAS IMPROVED THE QUALITY OF SERVICE WITH A CISCO IP TELEPHONY SOLUTION

MITSUBISHI IS ONE OF AUSTRALIA'S LEADING AUTOMOBILE MANUFACTURERS AND EXPORTERS. IT HAS AN ANNUAL TURNOVER OF MORE THAN 2.7 BILLION, 3,300 STAFF AND EIGHT OFFICES LOCATED AROUND AUSTRALIA.

Mitsubishi operates two state-of-the-art production facilities at Tonsley Park and Lonsdale, South Australia. The vehicle assembly plant at Tonsley Park produces up to 300 vehicles in a single shift for domestic and export markets. It also holds one of the largest centralised tooling maintenance facilities in the southern hemisphere, providing the technical and versatile support for Tool Design, Planning, CAD, CAM, Project Estimating and Production Engineering, which are so vital to the changing needs of the automobile industry.

The assembly plant at Lonsdale produces the V6 engines that drive the Australian designed flagship models, the Magna and Verada sedans and wagons, which are exported to the United States, Japan, Taiwan, New Zealand, the Middle East, Puerto Rico, Brunei and other Pacific countries.

THE CHALLENGE

IN EARLY 2000, MITSUBISHI'S 18 YEAR-OLD PABX PHONE SYSTEM HAD REACHED CAPACITY AND COULD NO LONGER DELIVER THE PERFORMANCE REQUIRED.

Furthermore, the vendor no longer supported it, which meant that operational costs were increasing and sourcing replacement parts was almost impossible.

Dirk van de Reep, Manager Communications and Mainframe Services, at Mitsubishi Motors comments: "We had eight separate PABX systems each with their own administration issues. With five offices interstate, we were finding it increasingly difficult to manage these disparate systems and the cost of fixing problems or providing new staff with a phone extension was escalating."

Instead of upgrading their PABX, Tony Newman, General Manager, Information Systems at Mitsubishi Motors Australia Limited, decided to investigate other technology solutions. So he tasked his team with researching both PABX/hybrid and pure IP telephony solutions from various vendors.

"Early on we could see the potential of IP telephony and we already had a strong relationship with Cisco Systems and knew about their commitment to customer service," said Dirk van de Reep.

"However, we also knew that before moving to IP telphony we would need to replace our corporate network, which was based on Token-ring & ATM, with Ethernet."

The catalyst for change came in 2001 when the Sydney office relocated to new premises, so rather than cable the new building with separate telephone and data cabling, Mitsubishi used the opportunity to upgrade the Sydney office and their entire network.

THE SOLUTION

IN MARCH 2001, THE CISCO IP TELEPHONY SOLUTION WAS ROLLED OUT AT MITSUBISHI MOTORS' HEAD OFFICE AND THE COMPANY STARTED UPGRADING THEIR REGIONAL OFFICE INFRASTRUCTURE TO ETHERNET.

A Cisco Catalyst 6500 switch is at the core of the network with Catalyst 3500 switches at the edge.

Dirk van de Reep explains: "When we add a new branch, we simply duplicate the existing regional infrastructure with a Catalyst 3500 switch and Cisco IP phones. We can have an office of 30 people connected to the network in less than a day."

The network upgrade continues with the ongoing replacement of analogue handsets with IP handsets and enhancements such as adding more servers to their cluster for better redundancy.

To date, Mitsubishi Motors has installed more than 620 Cisco IP handsets across their eight offices including 600 Cisco 7940 IP phones and 20 Cisco 7960 IP phones.

Cisco Account Manager, Greg Hall comments: "Mitsubishi Motors chose a selection of IP phones to suit their needs. The Cisco 7940 IP phone provides functionality and robust features for most departments and office staff.

"The Cisco 7940 IP phone is dynamic and designed to grow with Mitsubishi Motor's needs. Its features will keep pace with new changes via software updates to the phone's flash memory and it also has four dynamic soft keys that guide users through call features and functions.

"Built-in headset port and integrated Ethernet Switch are standard with the Cisco 7940 IP phone and it features a large, pixel-based LCD display which shows date and time, calling party name, calling party number and digits dialled."

To manage the entire Cisco IP phone system, Mitsubishi has installed Cisco CallManager, which is the software-based call-processing component of the Cisco IP Telephony solution. CallManager extends enterprise telephony features and functions such as unified messaging, multimedia videoconferencing, collaborative contact centres and interactive multimedia response systems. These interact with the IP telephony solution through Cisco CallManager's open telephony application programming interface (API).

Dirk van de Reep comments: "With one web-based interface, the IT team can easily manage the phones across the entire organisation. It takes just a few minutes to configure a new user, regardless of whether they're located in the next building or the next state."

THE RESULT

WITH THEIR CISCO IP TELEPHONY SOLUTION IN PLACE, MITSUBISHI HAS ALREADY NOTICED AN IMPROVEMENT IN THE QUALITY OF CALLS AND A REDUCTION IN OPERATIONAL EXPENSES ASSOCIATED WITH MANAGING AN ENTERPRISE PHONE SYSTEM.

An initial concern was that there might be a loss of quality when using IP telephony because voice would be travelling on the same cable as their data network.

Dirk van de Reep comments: "The phone is one of our key touch-points for our customers, inter-state offices and our suppliers, so we simply cannot have bandwidth problems that break up phone conversations, nor any intermittent static or drops in the conversation. However, Cisco has excellent Quality of Service (QoS) management which enables us to give voice priority over data across the network and eliminate bandwidth issues."

Greg Hall says: "With Quality of Service, Mitsubishi has total control over network and its resources. For example, they can limit the bandwidth consumed over a backbone link by FTP transfers to give priority to voice calls. The queue management tool used for congestion avoidance in the Cisco IOS QoS software raises the priority of specifically identified packets by limiting the priority of other flows."

Another benefit of their Cisco IP Telephony solution has been the savings on engineer call outs to add new phone extensions or move them. Previously with the PABX system, moving staff from one extension to another, even if it was just a few metres down the corridor, was expensive.

"Now, when staff move, they pick up their IP phone, plug it in at their new desk and they're configured on the network ready to take calls and check their voicemails with no intervention from me," said Dirk van de Reep.

An additional benefit has been the increased productivity for staff. Under the old PABX system, staff had to wait two days or more to have a new phone installed. It can now be achieved in minutes.

During a recent SAP implementation, The IT team was able to configure an IP telephony help desk in less than a day.

"Under the old system, it would have taken weeks," said Dirk van de Reep.

Office staff are also particularly impressed with the clear audioconferencing offered by Cisco IP Telephony and this has been a very practical use of the system between branches.

"THE FLEXIBILITY IS SUPERB, PEOPLE CAN MOVE DESKS, AS AND WHEN REQUIRED AND BE PRODUCTIVE FAR MORE QUICKLY. FROM AN ADMINISTRATION PERSPECTIVE, IT HAS SAVED US HOURS AND MADE IT REALLY EASY TO DIRECT CALL FLOWS."

DIRK VAN DE REEP,
MANAGER COMMUNICATIONS AND MAINFRAME SERVICES,
AT MITSUBISHI MOTORS AUSTRALIA LIMITED

As well as the easier administration of the phone system, the IP telephony network has brought many other advantages. It is far more efficient and reliable network to maintain because it is a redundant system with built-in failsafe mechanisms. It also offers higher bandwidth to users, leading to great network efficiencies.

Dirk van de Reep explains: "With Cisco IP Telephony Mitsubishi now has a solid foundation for growth. Already we have implemented an office wide phone directory on the system and we are looking at integrating Lotus Notes for scheduling of meetings down the track. As new applications and opportunities come along, we are in a great position to leverage them."

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