Business Solutions

CASE STUDY SPECIAL: LIC'S WAN/MAN NETWORK SERVING INSURANCE POLICIES ON THE NET

Life Insurance Corporation of India (LIC) has now made its services more extensive and accessible by extending its WAN to the far corners of the nation. The next step is serving insurance policies on the Web. by Brian Pereira & Minu Sirsalewala

When the customer base of a services-oriented company is almost four crore, and service contracts usually span a human lifecycle, enduring customer satisfaction right through becomes quite a challenge for a company. In such a business scenario, robust and extensive networking becomes mandatory for all operations.

The LIC WAN/MAN network is a perfect example of technology being used to streamline operations and take customer satisfaction to higher levels. LIC has now extended its WAN, voice-enabled it, and set up a Web server.

All this makes transactions a lot simpler and quicker for its customers. A policy holder will no longer need to visit the branch office and run from pillar to post, to check the status of a policy—for he will soon be able to do this online (akin to Internet banking). And in the near future, if someone lodges a complaint online or requests a change in the policy, it won't be lost under a heap of dusty box files. LIC says the new operational procedures will enable it to address customer grievances within a week.

LIC is benefiting too. Its online collections for premiums are rising rapidly every month. And because the new network is voice-enabled, the company has cut down drastically on costs for long-distance calls

NETWORK SETUP

The nationwide WAN is arranged in a hierarchical fashion. The Central Office (C.O.) at Nariman Point, Mumbai is the network core. Next in the hierarchy are the seven zonal offices located at Mumbai, Delhi, Calcutta, Chennai, Kanpur, Hyderabad, and Bhopal. The district/divisional offices (also known as MAN centers) come next, and these are in turn linked to the branch offices/branches, which are at the lowest tier in the hierarchy. All branch offices have LANs. To date, there are a total of 89 MAN centers.

There are two sides to the network—the Web server that offers customer services through the Internet, and the nationwide intranet (WAN) which uses leased lines and VSATs for connectivity. The WAN is being upgraded for zone/division communication using VoIP and video conferencing technologies.

Database servers and routing equipment form the heart of this network. The WAN is structured for distributed processing and there is no central database—each division maintains a database of policy holders. The servers at the branch and district offices hold policy information for customers residing at these respective areas only. The Central Office in Mumbai, maintains an index of policy numbers and the corresponding IP addresses of the servers on which these policies reside. For the first MAN center, LIC went in for Sun servers. Later on, for the other two MAN centers, Intel servers were selected, to maintain compatibility with the branch applications and systems. The servers at the MAN centers are being upgraded to the Intel Xeon platform. However, Sun servers are being used for Web services.

The servers at the MAN center running on SCO UnixWare 7 operating system have MF COBOL applications. The branch centers use Softek Cobol. Mail servers and application servers (for CRM) will be deployed at a later stage. For the leased line network, LIC has chosen Cisco routers, RAD modems/multiplexers and Cisco or D-Link unmanaged switches.

K. Chitra, Assistant Secretary (IT), LIC, says the routers at the zonal centers had to be upgraded as more MAN centers were added to the network. Initially, Cisco 2600 series routers were chosen for servicing the first 10 MAN centers (under seven zonal offices). But these were replaced with Cisco 3640 series last year, when another 33 MAN centers were connected. The routers at the zonal offices were once again upgraded to 3600 series as the network expanded, to connect 89 MAN centers in 100 divisions.

"The Cisco 3640 series routers (at the seven zonal offices) could not service all the divisions (MAN centers) under them. So at the zonal level we upgraded the routers to Cisco 3660 series (3661/62)," says Chitra. "The 3661/62 is a six slot router and it was chosen because it has more memory capacity and greater processing power. These routers also offer more slots for leased line terminations."

Presently, the MAN centers use Cisco 3640 routers and the branches use Cisco 1750/ 1720 series routers. These routers are voice enabled, but at present only data passes through. The links between the MAN centers and zonal centers carry both voice and data. The modems and multiplexer (MUX) are other essential equipment, and RAD

products were chosen. The MUX helps in consolidating separate channels, cuts down the number of modems and also reduces margin for failure.

Explains Chitra, "In the Central Office we had 20 lines coming in to the router. We could have gone in for an E1 channel (30 x 64 Kbps lines) from DoT. But this would require 30 separate modems. Also, in that case, if the E1 channel went down, then the whole line would fail. Hence we decided to go in for a RAD MUX which is similar to the equipment available at DoT. We have gone in for an E1 channel at our Bangalore, Thane, Pune and Mumbai MAN centers."

Five divisional offices/MAN centers and 15 branches will have VSAT connectivity, for linking distant divisions/branches (like those in the Eastern region), with the C.O. in Mumbai. The MAN centers with VSATs are Bongaigon, Silchar, Jorhat, Jalpaiguri, Srinigar/Jammu.

VSAT connectivity has been provided by HCL Comnet. SCPC-PAMA will be used for VSATs.

WEB-ENABLED SERVICES

A Web server has been set up at the central office (www.licindia.com) for the purpose of offering policy holders basic services. In the near future a registered user can avail of services like making modifications to a policy (change of address, change of nominee), querying the status of the policy, etc. Already, LIC can send policy holders premium notices by e-mail. Further, customers can use the Web for placing complains/grievances and these can be resolved within a week.

At present, policy holders can pay premiums online through services providers (ICICI bank, HDFC bank, UTI bank, Bank of Punjab, Corporation Bank, Billjunction.com and Timesofmoney.com.

"Through the website we will be offering a statement of all the premiums paid during the financial year, for filing of income tax returns. We plan to provide more value-added services later," says LIC's IT Head, Lakshmanan.

LIC is benefiting too. Payments via the Web are going up every month, and workflow processes have been streamlined. As of February 2002, there were 2,872 collections for premiums made through the Web, amounting to Rs 86,28,410.

"The collections we are getting via the Internet are much more than what we would get through a service provider. It has also reduced the time taken for a transaction," says Lakshmanan. "We are paying the bank (service provider) Rs 3 per transaction as collection charges. But we also have to send a notice to the bank, collect the payments, etc. When doing this the traditional way, it takes a much longer time."

Currently, the Web server and intranet/WAN are not directly connected, but LIC will interconnect the two with a leased line and place a firewall in between.