

The Standard for Success



The New Zealand Ministry of Social Policy steps into the 21st century with the world's largest production deployment of Cisco 7960 IP Phones to date.

Background

With a mission of “helping people move from welfare to well-being with a hand up, not a handout,” the New Zealand Ministry of Social Policy (MoSP) oversees the network infrastructure for three government organizations: the MoSP, the Department of Work and Income (DWI), and the Department of Child, Youth and Family (CYF). A single network supports all three organizations and 8000 employees across 210 offices delivering welfare services in New Zealand.

The New Zealand government has stated its intention to move quickly to e-government, using the Internet and other network-based tools and services to more effectively and rapidly deliver its services. “All departments involved are absolutely dependent on IT and telecommunications,” says Margaret Bazley, Chief Executive Officer at MoSP. “We’re further ahead with a common IT infrastructure and information platform than any other government agency [in New Zealand].”

Challenge

The MoSP started its Internet journey early. In 1994, Neil Miranda joined the then-Department of Social Welfare as Information Systems Coordinator. He found “a mish-mash of everything. We had about six different networks.

Voice was not even there—everybody had a different PBX and didn’t talk to each other.” He set out to define a technology vision for the department, looking toward future convergence of all technology services through a single network infrastructure. “I decided that we needed to have a plan for the future,” he says.

“Underpinning that plan were policies and standards; otherwise, we wouldn’t know where we were going. In the area of communications, IP was the de facto standard and we decided it would be the standard we would base all of our communications upon. By implementing standards, I’m getting a more predictable and manageable service that’s cheaper and faster for everybody.”

As with any government organization, the MoSP has budget considerations. Says Bazley, “Whenever we do any upgrade, we always try to look as far into the future as we can. We don’t have a lot of money at our disposal. We’ve done this several times in the past and it really pays off because it gives us a very good pay-back through the technology.”

This philosophy led to the design and implementation of a Cisco AVVID (Architecture for Voice, Video and Integrated Data) infrastructure in 1998-2000. A reorganization

during that time brought 2000 new people in 40 sites with Centrex telephone systems into the infrastructure for a total of 8000 users. Miranda was tasked with integrating IT infrastructures of new and existing agencies—without an increase in overall IT operations budget. He was already investigating ways to reduce operations costs through consolidating the voice and data networks. The sudden growth in user base became an impetus for an upgrade program to add telephony to the Cisco IP network.

A careful review and open bidding process in 1999 and 2000 among four vendors led to the selection of Cisco Systems as the telephony vendor. Cisco was chosen for several reasons. Because the MoSP already had a Cisco-based data network, it would be easier to deal with one vendor rather than many to resolve issues. While Miranda does not identify Cisco as a top voice-solutions vendor, he recognized Cisco's leadership in voice over IP (VoIP) and IP, his stated standard. "They had a viable solution to implement within the stated project timeframe, the cost was right, and we had their senior management commitment to achieve project outcomes." Miranda said. What clinched his decision was Cisco's outstanding customer service. "If I can't have a one-on-one relationship with the vendor, I don't want a relationship. It became apparent that Cisco had not only the better technology, but more commitment from its senior management."

To help with network design and implementation, MoSP contracted with Logical Networks New Zealand, a Cisco Gold Partner and systems integrator. Murray Jurgeleit, Managing Director at Logical Networks, understood the high standards set by Miranda for the job. "Being a Gold Partner means to our customer that they can rely on us to provide the absolutely best available levels of service to support their mission-critical networks." Clear Communications is the WAN network service provider.

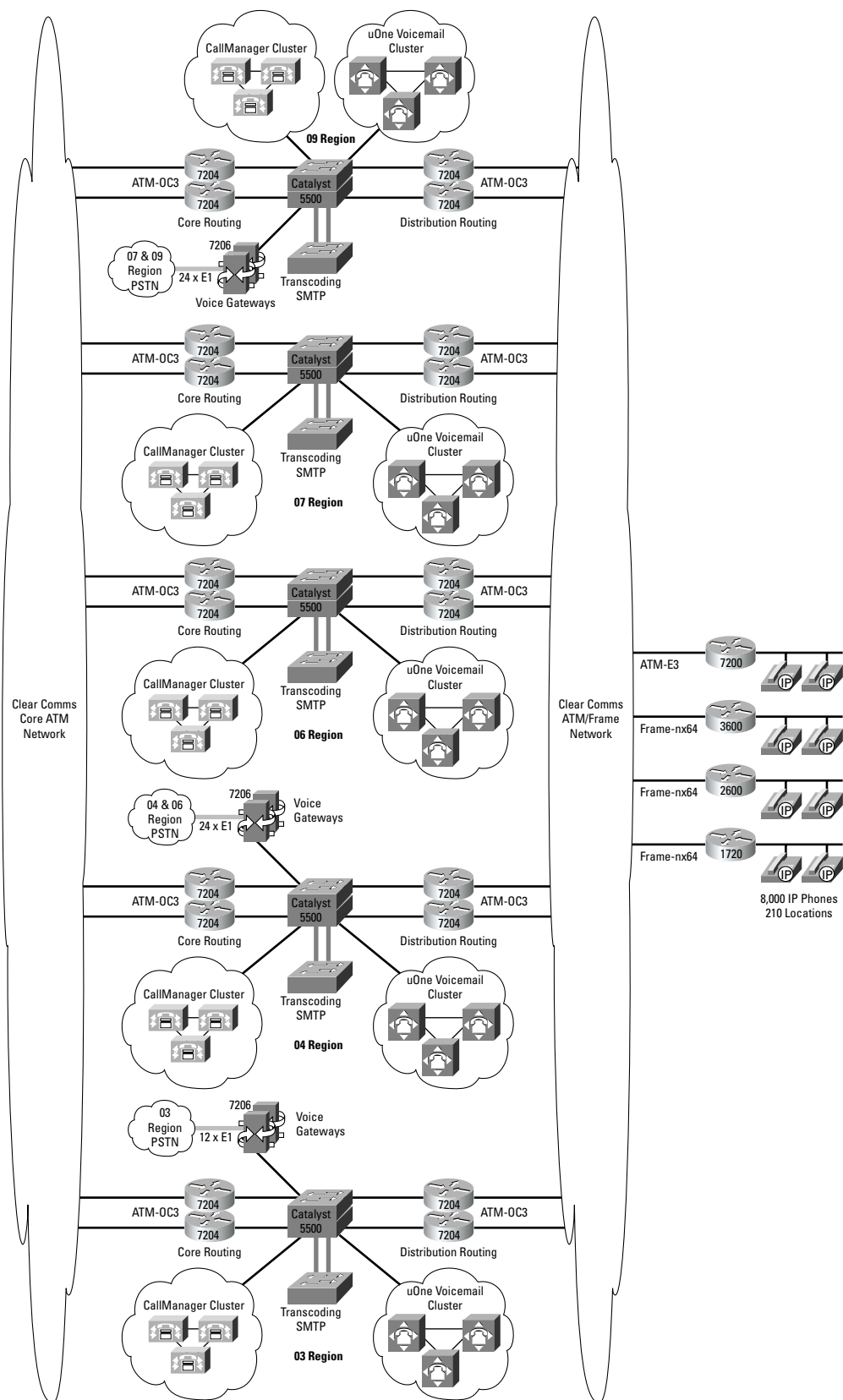
Solution

The MoSP network has four core sites in Auckland, Hamilton, Wellington, and Christchurch. The four core sites are interconnected via OC3 ATM links. Each has dual Cisco 7200 VXR distribution routers and dual Cisco 7200 VXR core routers interconnected via dual Catalyst 5500[®] Switches. All four sites are located within Clear Communications' carrier-exchange operation centers. Distribution routers connect to remote sites (approximately 210 of them) via Frame Relay or ATM.

Remote offices have a Cisco router and WAN link scaled to the number of users per site. The smallest sites have a Cisco 1720 Router; medium-sized sites have either a Cisco 2620 or Cisco 3640 Router, and the largest remote sites have a Cisco 7200 Router (Figure 1). The new network delivers switched 100-megabit switched Ethernet to every end device.



Figure 1 Ministry of Social Policy Cisco AVVID Network



Cisco Systems

With the exception of IP telephone handsets and remote router voice blades, all voice equipment is distributed among the four core sites. Each site has a single Cisco CallManager 3.0 cluster, with the exception of Wellington, which houses two clusters, one for Wellington and the other for Palmerston North. Each regional cluster has several Cisco uOne voicemail servers co-located and associated with it. A total of 30 servers deliver managed telephony from the four sites. Three of the four core sites have a Cisco 7200 VXR public switched telephone network (PSTN) gateway. Outgoing calls from a remote site are routed into the nearest core site, then to the PSTN.

All users in the network now have a Cisco 7960 IP Phone. Where a traditional private branch exchange (PBX) phone system would have required a technician to visit each site to hand-provision each phone at the cross-connect panel, the automatic configuration features of the IP phones saved a lot of time and money. While the transition did require a new dial plan, "Rolling out the phones was a logistics exercise, but not a technically complex one. We never visited the remote sites," says Jurgeleit. "We just sent the phones out. We educated an individual at each site who would educate the users. I was surprised that it actually worked seamlessly and painlessly. Doing it all from one location let us concentrate our high-level skills. It just makes the whole thing a lot simpler."

Results

Says Jurgeleit, "We were very impressed with not only the commitment of all the partners involved in this project, but the response we received from Cisco in providing the expertise on-site in New Zealand—right down to the people from the labs who write the code."

After testing and approving the Cisco IP telephony solution, the production rollout took four weeks from start to finish. The new phone network handles between 130,000 and 160,000 calls per day. After proving the system's stability for one month, MoSP decommissioned its 164 traditional PBXs and 40 Centrex sites. And the Ministry was able to keep its operational costs the same despite adding extra sites and 33 percent more users.

What's next? Miranda and his team are investigating Lightweight Directory Access Protocol (LDAP) v3 directory services and other Web-based information delivery to each IP Phone. They're also discussing ways to Web-enable their call centers. Says Bazley about the Cisco AVVID network, "It's a system to build on for the future."



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