

The ASSSM consolidates its communication network

USING ALCATEL-LUCENT VOIP SOLUTIONS



CASE STUDY

MARKET: HEALTHCARE

COUNTRY: CANADA



The Agence de Santé et de Services Sociaux de Montréal (ASSSM) [Montreal Health and Social Services Agency] relies on Alcatel-Lucent IP solutions to improve the accessibility and security of the organization's data

**Agence de la santé
et des services sociaux
de Montréal**

Québec 

In order to deliver an efficient and seamless service to the many service points within the health network for which it hosts data, the ASSSM decided to update its communication network. A wide-ranging project, which involves building a new data center in Montreal. Availability, high speed, infrastructure rationalization and security.... Technological as much as economic challenges, which were taken on by the ASSSM when it embarked on this project, in collaboration with the systems integrator, SSP Télécom, and Alcatel-Lucent.



THE ASSSM, QUEBEC'S PRIMARY HEALTH AND SOCIAL SERVICES AGENCY

Quebec is divided into 18 administrative regions, each with its own independent health and social services agency. The ASSSM is the largest of these agencies, as it serves the largest population areas and facilities within Quebec's health system. Nearly 2 million people and more than 400 service points, including residential facilities, treatment centers and hospitals are thus affected.

A body operating under the auspices of the Ministère de la Santé et de Services Sociaux [Ministry of Health and Social Services] of Quebec, the ASSSM's objective is to maintain the governance of the health and social services system within the Montreal region. Its main responsibilities include evaluating the health and well-being of the population, providing information to the general public, the integration and consistency of care services, and supporting the development of Montreal's university networks.

ESTABLISHING A NEW DATA CENTER TO MANAGE DEMAND

The main technological challenge facing the ASSSM is therefore to circulate information between its service points. Almost two terabytes of data transit through the system daily, including patient files, PACS medical imaging files and test results, a considerable volume, which requires a reliable infrastructure, the access and availability requirements of which are self-evident. Affiliated to the Montréal Health and Social Services Agency, the Montreal Technocentre sought to optimize its network performance in order to meet the increasing demand for data within the Montreal region in all circumstances. As a single data center cannot guarantee the permanent availability and security required for this demand, the need to build a twin facility quickly became apparent.

SSP TÉLÉCOM AND ALCATEL-LUCENT FOR CENTRALIZING INFORMATION SYSTEMS

The ASSSM issued an invitation to tender to coincide with the building of a new data center, to which SSP Télécom responded by proposing a comprehensive portfolio of Alcatel-Lucent IP solutions to meet the Technocentre's objectives in terms of quality of hardware and capacity to meet expectations effectively while remaining within a tight budget.

The new meshed network created is based on five Ethernet **OmniSwitch** 9800s with multiple 10G connections capable of handling large quantities of data, together with an **OmniVista** management console allowing for a centralized view of the new communication network and rapid hardware adjustments in response to technical or organizational needs. An **OmniAccess** Wi-Fi switch was also put in place to simplify access for visitors and personnel in transit.

Around 200 servers are currently distributed over the two sites, hosting the network data as well as various user applications. The 350 in-house users are connected via 6850s for both voice and data communications. "Capitalizing on the performance of Alcatel-Lucent's technologies has enabled the ASSSM to

"Alcatel-Lucent enabled us to install redundant infrastructure with very high availability, which fully meets the information resource needs of the facilities in the Montreal region."

Martin Miron, ASSSM Telecommunications Engineer





With Alcatel-Lucent, the ASSSM is in a position to guarantee data and systems reliability and availability in excess of 99.99%.

consolidate its communication network and rationalize its infrastructure reducing 500 disparate servers to around 200, distributed throughout the two Technocentre data centers. Centralizing the information resources of the various service points in the region facilitates access to information without compromising security, comments Daniel Landry, Director of Integration/Security at SSP Télécom.

COMBINING ACCESSIBILITY AND SECURITY

As in any structure within the field of health, the reliability of the information system is a critical factor that must be controlled. A power outage or problem with the network should not have any impact on the work of health professionals, who may need to access the system during surgery, for example.

This is why the design of both Montreal Technocentre sites is based on multiple physical redundancy, with one element taking over from another in the case of problems. Moreover, network security is ensured at all levels through the application of specific firewall rules, the installation of AOS AQM, and the use of IDS/IPS sensors deployed in HA mode, as well through activation of the quarantine module, intrusion detection and authentication of the **OmniVista** console.

Users thus enjoy a high level of security. Technocentre members can see who is on the network, verify the compatibility level using the rules put in place, manage access and rights, oversee activity, identify and resolve problems should they arise.

PERFORMANCE AND HIGH AVAILABILITY COMMITMENTS

With Alcatel-Lucent, the ASSSM is in a position to guarantee data and systems reliability and availability in excess of 99.99%. Network users can now quickly and securely access standard or specific data generated by specialist PACS or IMAGERY equipment. "The establishment of the new data center represents a major step forward for the ASSSM, because we are now assured of a reliable and efficient system to meet the key



CHALLENGES

- Centralize and optimize specialist and non-specialist information resources at the Montreal Agency
- Migrate telephony and data over IP
- Consolidate the IT systems of the two Montreal Technocentre sites
- Ensure the reliability of the new network in terms of availability and security
- Rationalize the cost of infrastructure

SOLUTIONS

- Installation of an **OmniVista** BMU2540 management console
- Installation of a network core with five **OmniSwitch** 9800s and sixteen 6850s
- Set-up of an **OmniAccess** WLAN 4302 + 6 AP70 for Wi-Fi

ADVANTAGES

- Improved communication system performance (99.99% availability assured)
- Very high level of communication network security (redundant infrastructure, firewall rules, management of peripherals, etc.)
- Rationalization of infrastructure costs linked to network consolidation
- Faster access to information (10 GB) and simplified use (Wi-Fi mode)



demand from our various medical centers for centralized and secure access to medical and social security information for the people of Montreal”, says a pleased Martin Miron, ASSSM telecommunications engineer.

THE FIRST BUILDING BLOCK IN RATIONALIZING THE QUEBEC COMMUNICATION NETWORK

The requirements of the Agency having evolved since the initial configuration in 2007, optimizations were undertaken as a result, particularly as regards information routing strategies. While finalization of the project to consolidate the communication network of the Montreal Technocentre is scheduled for the end of 2009, the ASSSM is planning new projects for other infrastructure in the near future, in line with the general policy of the Quebec Ministry of health and social services.

The new network established in the Montreal region is therefore but the first step in the development of a high-level infrastructure meeting stringent availability criteria. Over the next few years, the Ministry of Health and Social Services (MSSS) plans to optimize the IT infrastructures of all the administrative regions in Quebec. The efficiency and reliability of the infrastructure deployed at the Montreal Technocentre will contribute to demonstrating the reliability of Alcatel-Lucent equipment, as well as its ability to define, implement and improve the performance of a communication network in the health sector, whatever its size and the scope of its requirements.

“The strength of our proposal is based on Alcatel-Lucent’s ability to offer a comprehensive and flexible range of products covering all of the ASSSM’s needs (performance, availability, integration of voice and data over IP, etc.). Their close involvement throughout the project, from solution deployment to the development of applications to optimize the use of their equipment, was also an undeniable advantage for the ASSSM.”

Daniel Landry, Director of Integration/Security at SSP Télécom

BUSINESS PARTNER’S ROLE

SSP Télécom has provided the ASSSM with the most reliable and appropriate technologies to meet its objectives of centralizing information resources and consolidating the communication network. Alcatel-Lucent’s business partner also managed the installation and configuration of the hardware.

ABOUT SSP TÉLÉCOM

SSP Télécom plans and builds voice and voice over IP networks that interface on fixed-telephone, wireless, fiber-optic and microwave networks. SSP Télécom’s head office is located in the Trois-Rivières industrial park (Trois-Rivières Ouest sector) and the company has branch offices in Montreal, Kanata (Ontario), Calgary (Alberta) and Burnaby (British Columbia).