# AMSANT secures e-health records in remote Australia with DIGIPASS

**The Aboriginal Medical Service Alliance Northern Territory (AMSANT) is the peak body for Aboriginal community controlled health services in the Northern Territory. The organization provides advocacy and support services to its twenty-six independent members who provide primary health care services to Aboriginal people. To assist its members, AMSANT developed a shared IT infrastructure service secured by DIGIPASS technology, enabling health care providers in very remote areas to securely access via the Internet their applications and sensitive medical records anywhere, anytime.**

Aboriginal people make up more than 30% of the Northern Territory population of which 70% live in traditional lands outside major towns in remote communities. In these communities they lack access to mainstream services. AMSANT members aim to improve the health and promote the well-being of Aboriginal people in the Northern Territory by delivering health services.

## REMOTENESS AND HARSH CLIMATE POSE TOUGH CHALLENGES

High standards of management of data and information are essential to any health care organization. In achieving this, Aboriginal Health Services in the Northern Territory needed to meet particular challenges related to management and connectivity with key concerns around efficiency and security.
Critical to clinicians is secure, high performance access to centralized medical record systems across multiple remote sites with fast logon times, even over satellite communications.
Due to extreme environmental conditions such as floods and electrical storms, AMSANT's affiliated organizations faced a lack of reliable network connectivity. Power surges and floods cause a disruption of telecommunications services, sometimes leaving local health clinics without any network connection for periods as long as up to two weeks.

## SUPPORT OFTEN TWO DAY DRIVE AWAY

The Aboriginal Health Services generally run a number of remote clinics and have a highly mobile client base that could arrive at any clinic on any particular day. The Health Services realized that if they were to use an e-health system, centralized data storage was a real necessity in order to provide access to medical health records from any location.
A general lack of access to expertise, as well as the remoteness, extreme environmental conditions and budgetary constraints, turned the implementation of a secure and stable IT infrastructure into a major challenge.
Rendering support wasn't easy with professional IT staff being located in regional centers sometimes a two day drive away. Establishing local IT support at most sites was equally hard due to the high turnover of clinical staff.

## HIGH AVAILABILITY WITH CONSUMER GRADE TELECOMMUNICATIONS SERVICES

To assist its members, AMSANT secured Government funding to build a shared IT network. The organization identified that it needed a secure, high performance and reasonably priced solution utilizing the Internet, that would provide health care professionals anywhere with secure remote access to applications and patients' records.

CS2 (Collaborative Shared Solutions), were retained to develop the solution. The company has ample experience in setting up IT infrastructures in the remotest locations of Australia. CS2 developed, in conjunction with its partners, a robust, low cost end-to-end solution particular suited for environments where high availability, security, remote access and cost are key considerations.

Tackling the network connectivity issue was one of many challenges. Widespread telecommunications and power outages caused by summer floods or electrical storms meant that the Services were in need of more reliable infrastructure preferably using redundant communications infrastructure. To assure continuity of services regardless of remoteness and environmental conditions, CS2 proposed to use a combination of satellite and terrestrial Internet services to provide parallel and redundant communications paths. Simon Stafford at AMSANT tells us :"We now enjoy a much greater level of system and bandwidth availability then we did before, using simple consumer grade services while at the same time realizing major cost savings by excluding dedicated telecommunication services."

## VIRTUALIZATION TECHNOLOGY REDUCES COSTS

The local IT infrastructure at the clinics were typically unstable and insecure, and had to be transformed into an efficient, straightforward and cost-effective design.
CS2 recommended NetLeverage's ThinPoint solution to provide cheap access to central IT services whereby applications and data are held on a remote secure server. Using "application policy based routing" technology, ThinPoint delivers applications and data to a users' thin client creating a virtual desktop environment. The technology enables multiple and concurrent users to share and remotely access the same operating system, applications and information running in a high security data centre.

A simple plug-and-play hardware appliance on-site manages all network connections as well as the local LAN. Additionally, all desktop infrastructures have been replaced with thin clients. The concept has several advantages: local infrastructure costs have been severely cut by using thin client infrastructures as they require less maintenance and have a longer life span than desktops. Local servers have been eliminated thanks to the plug-and-play appliances, which not only reduce costs, but do not require any on-site expertise and support.

## DATA CONFIDENTIALITY AND BACK UP ARE CRUCIAL

The solution proposed by CS2, gives health care providers remote access to the Health Services' patient data and applications. Medical health records, programs and applications are held on remote secure servers at the ac3's data center in Sydney and are delivered over consumer grade broadband Internet connections. ac3's data centre provides a highly reliable and secure environment for hosting mission critical systems, ensuring data back-up and system security thanks to 24 hour professional service level agreement.
As medical records can be accessed through an open internet connection, the solution had to adhere to very high security standards that met stringent security requirements. In order to secure and guarantee the confidentiality of the data, AMSANT took no risks. Recommended by CS2, VASCO's DIGIPASS technology was implemented to secure AMSANT's system, preventing unauthorized access at all times.

## DIGIPASS 860 SECURES E-HEALTH SYSTEM OFFERING ADDED FLEXIBILITY

Each health worker is provided with a portable, personalized authentication device, DIGIPASS 860, as the key to access patient data and relevant programs and applications. DP 860 is a hybrid security device that supports both PKI and one-time password generation in one single product. By pressing the button on the device, DIGIPASS 860 generates a unique one-time password that is used to log on to the network. Once the password has been validated, health care professionals can access patients' medical records online.

The USB-stick on DIGIPASS 860 gives the health care centers added flexibility as health care professionals can log on and use their DIGIPASS to move from consulting room to consulting room without losing their computing session. They are hence not required to log on again; they simply plug the USB-stick into any standard USB-port on the PC.
DIGIPASS 860 is compliant with various industry standards, ensuring interoperability within a wide range of applications. Implementation into ThinPoint's solution was executed by NetLeverage and went smoothly. The administration and assigning of DIGIPASS devices is managed by the organizations themselves.

Many clinical staff work on a fly-in, fly-out basis for fixed periods of times, it was essential that the administration process of any security solution was straightforward. VASCO met these requirements with an easy to manage and almost intuitive user interface.
"VASCO is the Rolls Royce in authentication", Alistair Muir, Director of CS2, states. "It fitted the bill exactly and wasn't a big cost in terms of the rollout project. With such a leading name in Internet Security, we were confident VASCO could meet our stringent security standards."

## OUTCOME EXCEEDS EXPECTATIONS

The outcome has far exceeded expectations. DIGIPASS allows Aboriginal Health Services to improve the clinical quality of their care. The e-health system has enhanced the Health Services' reporting and planning leading ultimately to better outcomes for Aboriginal people and their communities across the Northern Territory.

Simon Stafford at AMSANT says: "Our patients are highly mobile, but now no matter which clinic they visit, the same information can be accessed, infinitely improving patient care. Health care professionals in remote locations can access all information online, at any given time. DIGIPASS even allows them to securely receive pathology data electronically where before they were faxed or physical mailed; with mail being delivered only once a week. All in all, the solution has considerably enhanced our availability and security, while cost have been significantly reduced, allowing a much needed redirection of finds into urgent medical programs."
According to Alistair Muir AMSANT now has some of the leading infrastructure of any health organization in Australia at a very affordable cost. "The AMSANT network is an example of how all factors in health networks – access, cost, security, speed, ease of use and operational issues can be addressed to benefit patients and support a high level of care regardless of where in the AMSANT region they may be."

### Objective

Provide health service providers in the Northern Territory with an easy to manage security solution to secure remote online access over the Internet to applications and patients' health records.

### Challenge

Remoteness and extreme environmental conditions, combined with an unreliable and unstable telecommunications infrastructure constantly challenged the continuity of services. IT capabilities and support in very remote areas were virtually non-existent and low budgets are a major constraint.

### Solution

CS2 developed a low cost end-to-end solution integrating VASCO's DIGIPASS technology to secure remote online access to AMSANT's e-health system. Redundancy is guaranteed through terrestrial and satellite connections. CS2 integrated NetLeverage's virtual desktop technology replacing previous desktop infrastructures hence severely reducing local support requirements and costs. All data and applications are centralized, securely stored and managed by ac3's data center in Sydney.

## About AMSANT

AMSANT is the peak body for Aboriginal community controlled health services in the Northern Territory and advocates for the provision of high quality primary health care services in accordance with the health needs in Aboriginal communities. Through its member organizations and the communities they represent, AMSANT seeks to build strong and viable capacity for the provision of effective health services.

## About CS2

CS2 (Collaborative Shared Solutions) is a sister company of Convergence e-Business Solutions. The company evolved out of Convergence's specialist project work in the field of distributed network systems architecting, development, implementation and support. CS2 has developed – in conjunction with its partners – a robust, low cost end-to-end solution particular suited for environments where high availability, security, remote access and cost are key considerations.

## About NetLeverage

NetLeverage is an Australian owned company and is the developer of the ThinPoint and Dekstra products. Using advanced architecture and design, the new generation of application networking appliances from NetLeverage Pty Ltd, provide network solutions that meet small, medium and large business needs and demand at prices they can now afford.

## About ac3

ac3 provides professional management services for computing and networking equipment to best practice standards. All equipment is housed in secure, reliable data centers at the Australian Technology Park and at Global Switch. ac3 is a private company, owned by the NSW government and eight universities.

## About VASCO

VASCO is a leading supplier of strong authentication and e-signature solutions and services specializing in Internet Security applications and transactions. VASCO has positioned itself as global software company for Internet Security and designs, develops, markets and supports patented DIGIPASS®, DIGIPASS PLUS®, VACMAN®, IDENTIKEY® and aXsGUARD® authentication products. VASCO's prime markets are the financial sector, enterprise security, e-commerce and e-government.

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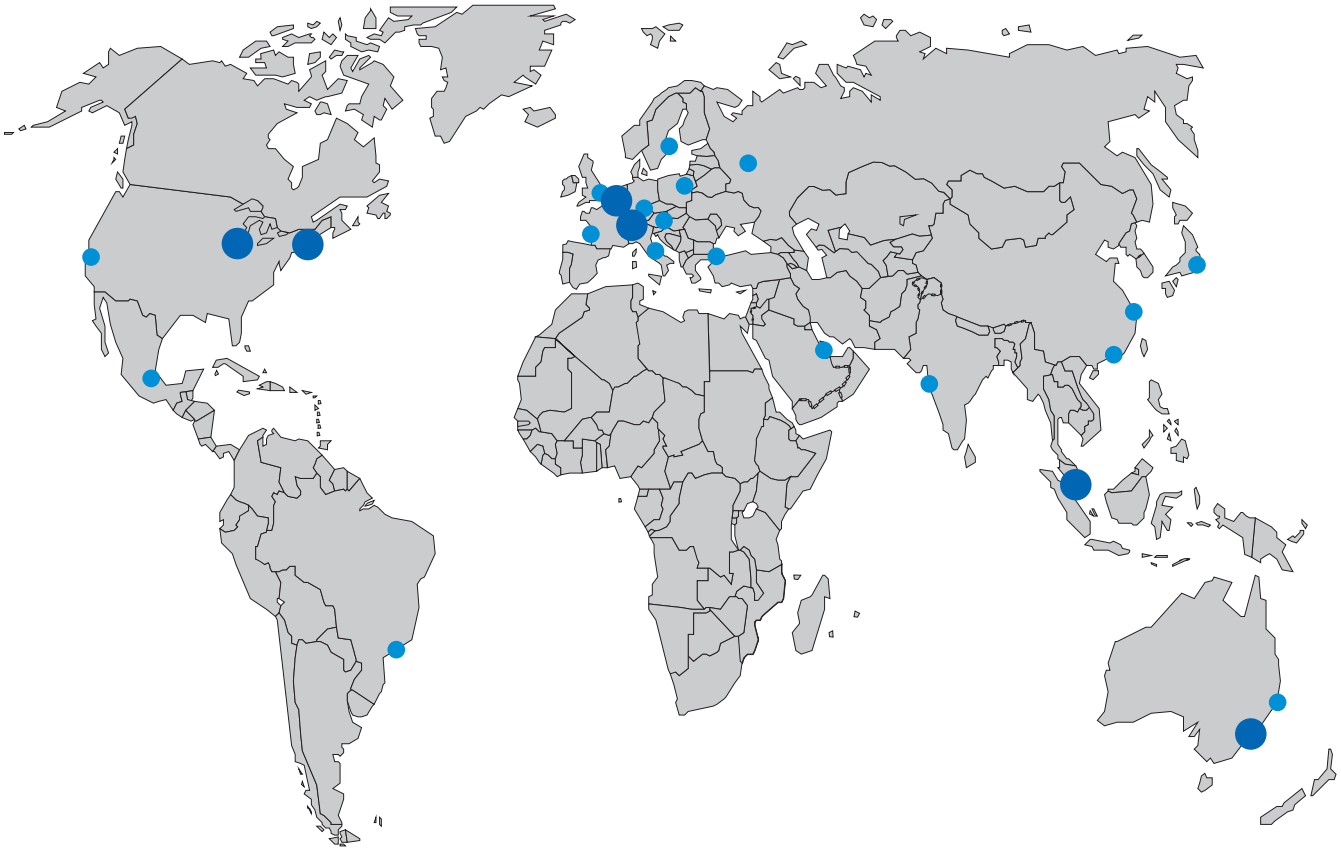

## www.vasco.com


**CORPORATE HQ**
**CHICAGO (North America)**
phone: +1 630 932 88 44
info-usa@vasco.com

**INTERNATIONAL HQ**
**ZURICH (Europe)**
phone: +41 43 813 3500
email: info-europe@vasco.com

**BRUSSELS (Europe)**
phone: +32 2 609 97 00
email: info-europe@vasco.com

**BOSTON (North America)**
phone: +1 508 366 34 00
email: info-usa@vasco.com

**SYDNEY (Pacific)**
phone: +61 2 8061 3700
email: info-australia@vasco.com

**SINGAPORE (Asia)**
phone: + 65 6323 09 06
email: info-asia@vasco.com