

Case Study

Investment Bank Goes Out-of-Band to Manage Security



Introduction

When the investment banking division of a nationwide bank needed to deploy new security equipment for its Web services, it found itself having to balance its device management needs with corporate IT physical security guidelines that limit access to equipment sitting outside of its network security perimeter. The solution – an out-of-band remote management solution using advanced console servers from MRV Communications.

Background

The project started when the corporate investment banking (CIB) division's IT team needed to deploy a new application firewall for its Internet-based services. In addition to increased firewall capabilities, this new security solution included enhanced IP and port filtering along with HTTP protocol validation and the ability to offload encryption tasks from web servers. However, these systems needed to be physically located outside the corporate firewall and that meant that they had to be in the area known as the demilitarized zone (DMZ) - a part of the network closely managed by another organization within the corporate IT team.

Even though CIB IT team had gained a very good reputation throughout the company for its innovative use of technology which afforded some additional flexibility regarding some corporate IT standards, those courtesies did not extend to solutions located in the DMZ. The CIB IT team worked out an agreement to locate its application firewall gear in the area of the network they desired, but was not granted DMZ access for routine maintenance via existing management methods.

MRV Solution

The solution to CIB IT team's needs is the LX 4000T console server from MRV Communications because it offered the lights out management features, flexibility of deployment and granular control CIB IT needed to securely manage its co-located equipment.

Of the many built-in security and management features of the LX 4000T family, one that appealed to the CIB IT team was the secure shell (SSH) protocol support for communications between the firewall devices and the console server. Additionally, the MRV solution offered native support for security and addressing protocols that the division used, including LDAP, RADIUS and SecurID allowing the LX 4000T to be seamlessly integrated into many network configurations. Another differentiating factor that helped position the LX over the incumbent supplier was the ability to set security parameters on a per port-level, which allowed CIB IT to isolate the ports for its gear from other systems residing in the DMZ. This feature allowed ports and devices to be physically located next to one another while logically isolated.

The LX family is regarded as one of the industry's most secure console server families as it is the first to meet the demanding FIPS 140-2 US Government cryptographic security standard. That is in addition to supporting a full range of security standards including per port password protection, SSH v2.0, SNMP V3, IP V6, RADIUS, SecurID, LDAP, TACACS+, PPP PAP/ CHAP, PPP dial-back, user access lists, and on-board database.

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The LX console server family supports both a command line interface (CLI) as well as an embedded graphical user interface (GUI). The CLI is accessible via serial connection, standard Ethernet port, and/or modem using telnet/SSH. The lead engineer for the division preferred the granular control of the command line interface (CLI), while others on the team preferred the graphical user interface (GUI).

The 1RU height of the LX Series was another important factor as rack space was at a premium. The dual power supply versions of the LX Series helped the CIB IT team meet the corporate availability guidelines for data center equipment. Finally, with its wide range of capabilities, the MRV solution was as much as 90% more cost-effective than competing solutions.

Implementation

The project took only four months from evaluation to installation. A thorough product evaluation ensured that the product could meet the team's need in real world environments and could integrate into its existing security infrastructure. In total, the CIB IT team deployed the LX 4048T console server, which supports 48 serial ports, in six locations throughout its network.

Success

Once the team validated that the device would integrate into the network, they found twice as many deployment opportunities than they had initially anticipated. The success of this implementation has led the division's IT team to evaluate additional capabilities provided by MRV's out-of-band networking solutions such as the LX Series Intelligent Power Management devices that allow them to address their "green initiatives" through remote power control as well as provide the ability to remotely reboot frozen or malfunctioning equipment without onsite, physical access to the equipment.

The MRV LX solution allowed the CIB IT team to gain its desired management access while operating within corporate IT guidelines regarding remote and physical device access. With lights out management, the group can address problems from the management console in a way that doesn't open new security holes and which protects their devices and those of the corporate IT group's devices.

LX Series Console Servers

The LX Series Console Servers support configurations from 4 to 48 serial ports, AC/DC redundant power options, and integrated v.92/GSM-GPRS modem. The devices support rich security and management functionality in addition to featuring distributed clustering and automation capabilities.

- **Wide Range of Applications —**
Enterprise data centers, Remote/branch offices, Telco central and remote facilities, Utilities, Test and development labs
- **Connectivity via Ethernet, Serial, dial-up and/or cellular modem —**
Access equipment via IP or modem to device serial console ports from any location
- **24 x 7 Lights out management —**
Provide for unmanned, remote service, or automated testing
- **Automated Notification & Actions —**
Reduce response time and increase system availability and simplifies operations
- **Power, Environmental, Infrastructure Management —**
Monitor and control resources remotely via a single management interface
- **Industry-leading security —**
High level of encryption and secure access methods including FIPS 140-2 Certification
- **Ease of Configuration —**
CLI, SNMP, and Web based management interfaces
- **Multi-level user profiles —**
allow user experience customization or manage equipment sharing

MRV has more than 50 offices throughout the world. Addresses, phone numbers and fax numbers are listed at www.mrv.com. Please e-mail us at sales@mrv.com or call us at 978-431-5011 for assistance.