

STONESOFT



Case Study - Swisscom Mobile, 2006

A firewall for all occasions

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Few industries face the challenge of coping with business developments as rapid as those in the mobile phone sector. The breakneck pace of change in core technologies is forcing these organisations to ensure the security of data and key applications around the clock while simultaneously providing unlimited access to the Internet and corporate intranet.

Swisscom Mobile, Switzerland's leading supplier of mobile telecommunication solutions, offers a comprehensive range of nationwide mobile voice and data communication products and services. Swisscom Mobile has deployed a multi-layer security zone architecture in order to meet the increasing need to protect computers against unauthorised access. Within this architecture, individual areas are protected by fully independent firewalls. The main firewall technology deployed by Swisscom Mobile is StoneGate, a system delivered by Finnish security expert Stonesoft. StoneGate is the only firewall/VPN (virtual private network) system on the market that provides secure connections between various Internet connections, while also taking account of both inbound and outbound traffic. The StoneGate security solution, which includes a user-friendly management system, supports high data throughput, are very flexible and can be adapted to individual customer's needs, makes it particularly attractive for large organisations with a variety of sites and security application demands. These unique selling points all contributed to Swisscom Mobile's decision to collaborate with Stonesoft and integrate StoneGate into its new network architecture.

'Quad zone' security architecture

Swisscom Mobile's innovative network architecture has been configured with four distinct security zones. The design breaks down the entire network environment into separate areas, each denoted by one of four colors. If a laptop has been re-leased for use in the orange application zone, for example, the system ensures that it is prevented from accessing the white (un-secured), yellow (secured) or red (high security) zones. The computer can then only work in the zone it has been released for, this zone being hermetically separated from the other critical network areas.

"Our new four-layer security concept allows us to provide optimum data security as well as to respond more quickly to developments in our core own technologies. This means that scalability is fundamental to our security solution and is therefore a make or break criterion for us. Each distinct security area requires firewalling, regardless of whether or not the others are in operation," says Roy Culley, expert in Swisscom Mobile's Network Management department.

Hierarchical rule set

The StoneGate firewall has outstanding scalability thanks to the hierarchical structuring of the indi-

vidual filter rules on the firewall. Firewalls use rules to check inbound and outbound data packages. The results of these checks determine whether packages are allowed to pass or are blocked. In contrast to conventional firewalls which bundle all the rules into a single evenly weighted list, StoneGate's data checks are hierarchically structured, thereby improving efficiency. Each data packet must first be granted access by a top level rule, before it is allowed to pass to a secondary sub-rule check. It is then re-verified for conformance with individual sub-rules. All non-compliant data packets are immediately blocked by the segment concerned and forwarded to another super-ordinate rule.

"We used to have around 350 rules in a single, massive rule set," explains Culley. "StoneGate supports hierarchical structuring in which the rules are clearly broken down into main and sub-rules. This allows modifications to the rule sets to be implemented quickly and easily."

Integrated high-availability and load-balancing

The StoneGate firewall has been designed to operation with several network nodes in a single active cluster. Should one of these units fail, all data traffic is immediately re-routed to the other active units without any detrimental effect on availability. This integrated load-balancing system ensures that complex calculations or large numbers of queries are distributed over several servers. This protects the system from total failure in the event of a hardware defect and provides administrators with a flexible means of managing a complex security system. These are indispensable functions in extremely high-bandwidth networks - such as those operated by Swisscom Mobile. Fortunately, dynamic load-balancing and high-availability are integrated into the StoneGate firewall by default.

Management: "Unpacking the hardware was what took longest!"

Complex, segmented networks can only be managed and maintained constructively via a centralised system. Stonesoft provides its StoneGate Management Center; a uniform, central management instance that enables operationally secure remote administration through simple remote update functions, central alarm management and a wide range of reporting functions. All this enables administrators to respond faster, cut workloads and reduce total cost of ownership (TCO). StoneGate allows numerous, independent firewalls to be managed

"Stonesoft staff provided excellent service."

Roy Culley - Network Management - Swisscom Mobile



from a single management system. At the same time, StoneGate also runs on standard hardware platforms.

According to Culley, installation is child's play. "Unpacking the hardware and in-stalling it in the rack was what took longest," he admitted. "The system is in-stalled from a CD-ROM and takes less than 5 minutes. After that, the system reads in the information it needs."

The CD-ROM based installation means that it is also easy to restore StoneGate in the event of a crash, while the installation of the management and log server can also be completed in a jiffy. StoneGate is also compatible with both Microsoft and Linux environments.

Excellent customer service appreciated

Finally, Roy Culley was keen to mention how impressed he was by the technical and customer oriented service offered by Stonesoft during and after the implementation phase: "Stonesoft staff provided excellent service. Whenever a difficulty arose, they responded promptly and resolved the problem entirely."

About Swisscom Mobile:

With a 62 per cent market share of regular customers and a customer growth rate of 69% in 2005, Swisscom Mobile is the #1 address in the Swiss mobile telecommunications sector. In 2005, Swisscom Mobile reported revenues of CHF 4.168 billion and it currently registers around 4.3 million NATEL® customers. The enterprise operates a nation-wide GSM network (900/1800 MHz) which was upgraded with EDGE broadband technology in spring 2005. In February 2006, Swisscom Mobile was the country's first network operator to commission a new turbo-network, HSDPA, which, from day one, was around five times as fast as UMTS – roughly the same bandwidth as an ADSL connection. Swisscom Mobile also currently reaches around 90 per cent of the country's populated area with its UMTS network. In addition, it also provides internet access via wireless LAN at around 1,000 hotspots.

This unusual technology mix serves as the basis for a universal, mobile broadband network and high quality mobile phone services. Swisscom Mobile started offering UMTS based services such as live TV and video telephony in its portfolio in November 2004; another of its innovative offerings is Mobile Unlimited, a PC card that that establishes automatically and interruption free the fastest possible mobile online connection.

Incidentally, while NATEL® subscribers are optimally attainable in Switzerland, they can also be reached via over 400 mobile networks worldwide.



About Stonesoft

Stonesoft Corporation is an innovative provider of integrated network security and business continuity. Stonesoft is a global company focused on enterprise level customers requiring advanced network security and always-on business connectivity with low TCO, best price-to-performance ratio, and highest ROI. StoneGate™ Security Platform unifies

firewall, VPN and IPS, blending network security, end-to-end availability and award-winning load balancing into a unified and centrally managed system for distributed enterprises. Founded in 1990, Stonesoft Corporation has corporate headquarters in Helsinki, Finland and Americas headquarters in Atlanta, Georgia.

The StoneGate Platform

StoneGate security and business continuity platform integrates Stonesoft's firewall, VPN and IPS technologies with key components to ensure the highest network and Internet availability. This solution has been designed to protect business resources through different security levels, and detect and react to threats by ensuring at the same time a continuous availability thanks to StoneGate's native clustering features.

Moreover, Stonesoft's patented Multi-Link technology allows for load balancing and high availability also in connections from and to Internet, and between VPNs. By offering a global distributed management through a single centralized management server, StoneGate allows organizations to reduce costs and simplify their security and network infrastructure management.

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