



# SWISSCOM CASE STUDY

## Swisscom IT Services Implements Simply Managed Linux (SIMLUX) with Red Hat and JBoss Solutions



### FAST FACTS

Industry:	IT service provider
Geography:	Switzerland
Opportunity:	Swisscom IT Services needed to create a standardised and stable operating system environment to host outsourced services for its customers. The company also wanted to simplify the provisioning and allocation of new servers by creating an automated staging infrastructure.
Solution:	Software: Simple Managed Linux (SIMLUX) including Red Hat Enterprise Linux 5 with virtualization, Red Hat Cluster Suite, Red Hat Satellite Server, JBoss application server Hardware: IBM Blade servers
Benefits:	Swisscom IT Services now has a highly stable standardised Linux platform called Simply Managed Linux (SIMLUX).  The solution, combining Red Hat and JBoss solutions, delivers simple management through the reliable Red Hat subscription model.  The solution also delivers top price-performance ratios for Swisscom IT Services.

### BACKGROUND

Swisscom IT Services is a strategic subsidiary of the Swisscom Group, the largest Swiss telecommunications provider, and is one of the largest outsourcing companies in Switzerland. It offers services that range from the integration, operation, and further development of complex IT environments to the development and maintenance of applications.

### OPPORTUNITY

Swisscom IT Services was running a comprehensive Linux infrastructure at the beginning of 2005. But Bertrand Dafflon, the head of the internal IT department, decided to further advance the company's infrastructure. Dafflon's team looked to implement a completely

standardised Linux environment with an automated staging infrastructure for the majority of applications.

### SOLUTION

Under the name "Simply Managed Linux" (SIMLUX), Swisscom decided to work with Red Hat to develop a highly flexible and effective infrastructure for its data centres.

"Over the years, we have seen time and again that Red Hat follows a more conscientious approach than others. Red Hat only makes functions available once they are stable and suitable for enterprise use," said Thomas von Steiger, systems engineer at Swisscom IT Services. "We run many applications within the SIMLUX environment that are critical to our company and our clients, making Red Hat's concentration on the reliability of its software essential to us. We believe that the principles of open source development are best represented by Red Hat. We would rather use open source software for SAN multi-pathing than the



tools provided by the SAN provider. In this way, when we carry out a kernel update, we can update the multi-pathing functions at the same time without having to worry about proprietary drivers and so on."

Swisscom IT Services uses IBM blade server hardware for the SIMLUX infrastructure. The IT team has assigned both data management and the operating system to a Storage Area Network (SAN) and has enabled the blade server to boot directly from the SAN without a hard drive. This ensures system stability and hardware independence. The server hardware can be replaced easily with minimal configuration, as all the data is held separately on the SAN. As a result, the blade servers now require less cooling because without a hard drive, they produce much less heat. In addition, the SAN images serve as the basis for the automated staging infrastructure, making it possible to allocate a new server with just a few clicks in a web interface—a process which only takes about 30 minutes.

**"The decisive factor in choosing Red Hat was the company's total commitment to the reliability of its software and its open source strategy. Our clients depend on installations such as SAP in our Linux environment. There was no serious alternative to Red Hat in that respect."**

**Bertrand Dafflon,  
Head of Linux & Middleware Engineering  
Swisscom IT Services**

Swisscom IT Services deploys web, application, and database servers. All software is installed in the RPM format developed by Red Hat. So the company can use Red Hat satellite server as the central administration centre for updates, monitoring, and allocation.

As of June 2007, Swisscom IT Services operates approximately 70 SAP, 40 Oracle, 90 Web and 100 JBoss application servers in the Red Hat Enterprise Linux-based SIMLUX environment. The IT service provider also uses Red Hat Cluster Suite as the basis for 20 cluster nodes. The SAN provides 40 Terabyte of memory too. With the benefits of Red Hat's management tools, Swisscom IT Services' two Linux administrators are more than capable of maintaining the entire infrastructure. They ensure optimum supply for more than 50 outsourcing clients on the SIMLUX platform in addition to other responsibilities.

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## BENEFITS

The SIMLUX infrastructure offers Swisscom IT Services an extremely stable and flexible data environment that can be managed centrally by Red Hat Satellite Server. Red Hat's subscription model also gives Swisscom the ability to benefit from technical innovations and updates without incurring additional costs. Since 2006, Swisscom IT Services has implemented 64-bit applications and device mapper multi-pathing for booting from the SAN after a corresponding operating system update. At the start of 2007, Dafflon's team also began the most crucial test phase for server virtualization with Red Hat Enterprise Linux 5.

"Virtualization with Xen is a good example of a function that other providers have pressed ahead with, without being able to offer the required stability and integration into the complete solution," said von Steiger. "In contrast, we wanted to optimise our hardware capacity without endangering reliability for our clients. Red Hat's virtualization solution makes this possible. With virtualization integrated with Red Hat Enterprise Linux, new systems are provisioned as virtual machines. Red Hat Enterprise Linux and the JBoss Application Server make it possible to integrate even the most demanding of architectures into a virtual infrastructure. Swisscom IT Services has installed a cluster of JBoss Application Servers in virtual machines on Red Hat Enterprise Linux."

"Red Hat's acquisition of JBoss was another lucky break for us," said Dafflon. "Since the acquisition, we have been able to profit from the same excellent price-performance ratio for middleware as for the operating system layer."