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Stein Ove Røv
IT Director at Komplett

Komplett Delivers Fast and Reliable E-Commerce Experience to 1.5 Million Users with F5 BIG-IP LTM



Industry

E-Commerce

Challenges

- Ensure quality of service and rapid response time
- Upgrade payment systems
- Simplify the management of code changes and certificates

Solution

- F5 BIG-IP® Local Traffic Manager™ 6400

Benefits

- Improved customer experience
- Ability to scale with rapid traffic growth
- Compliance with rigorous security standards
- Encryption, decryption, and simplified management of SSL certificates

Overview

Headquartered in Sandefjord, Norway, Komplett ASA sells computer components, PCs, home electronics, and related equipment to end users and resellers. With 16 online storefronts in 10 countries, Komplett is one of the leading e-commerce companies in Europe. In 2007 the company earned nearly NOK 3.2 billion (US \$583 million) in revenue and received an average of more than one order every minute (24 hours a day, seven days a week).

As increased traffic began to impact the online shopping experience for its 1.5 million registered users, Komplett needed a way to scale its infrastructure to support rapid growth and ensure strict adherence to emerging security standards. Using F5 BIG-IP Local Traffic Manager 6400, Komplett improved the speed and stability of its websites, boosted the efficiency of its email communications, put its online payment procedures in line with international security standards, and greatly simplified the management of its security certificates.

Challenges

Komplett's rapid expansion and traffic growth in its online stores produced big challenges. The company had several goals in identifying a solution to these challenges.

First, Komplett needed to improve site performance. Existing systems could not be scaled beyond a certain level, resulting in sluggish response times and a diminished overall purchasing experience for customers.

At the same time, existing and impending legislation created a need for Komplett to upgrade its payment systems to ensure compliance with de facto and official security standards, such as PCI DSS, throughout the company's various areas of operation.

Next, email is an important communications channel between the company's customers and internal operations. Komplett's email system handles 60 to 70 million emails per year, and the company saw the potential for significant savings by improving the system's efficiency.

Finally, over time Komplett has developed a large amount of proprietary code for its online stores. Managing changes in code and related design elements had become a particularly demanding task; SSL certificate management on all the company's different servers alone required a huge effort. The company recognized the need to simplify these tasks.





Solution

Availability and response time are the most important criteria for the success of any online store. Customers who are used to standing in long lines in a typical brick-and-mortar retail environment have a tolerance level of nearly zero when it comes to waiting times in the virtual world. Therefore, Komplet took the warning signs of reduced quality of service very seriously.

In 2005, Komplet initiated a project to prepare its architecture for increased traffic, allowing for extreme growth in the future. As part of the project, Komplet consulted with Watchcom Security Group AS, an accredited F5 Value-Added reseller, which brought in F5 as a partner.

Komplet has replaced its entire IT platform, both in terms of hardware as well as software, and today the system is running on an IBM server platform. Komplet performed very thorough research before deploying two BIG-IP Local Traffic Manager (LTM™) 6400s from F5.

In total, Komplet has approximately 200 servers. The two BIG-IP LTMs perform an extremely important job by balancing the load between the 30 and 40 servers that interface with customers and back office systems.

"We have between 80,000 and 90,000 document entries for SAP on a normal day, and during periods when sales campaigns result in greatly increased traffic, that figure can easily double," says Stein Ove Røv, IT Director at Komplet. "Overall, traffic increases have been formidable, and had we not carried out the project that we

started in 2005, the system would have been brought to its knees."

Benefits

The flexibility of BIG-IP LTM means there is little or no risk associated with triggering increased traffic, such as might occur with advertising campaigns. During the 2007 holiday season, the company ran a number of campaigns in major markets via radio, TV, and newspaper advertising, as well as through printed catalogs. The traffic these campaigns generated came in peaks.

"Historically, we receive more than one order a minute around the clock, seven days a week. That figure nearly doubled over 2007. During the Christmas campaigns, the level was even higher," says Røv. BIG-IP LTM provides the capacity to deal with these spikes in demand while preserving the overall customer experience.

"The F5 solution is extremely stable. Everything has functioned exceptionally well the entire way, and even better than we anticipated," says Røv.

Finally, in an online storefront operation of this scale, security is exceptionally important. Without commenting on Komplet's specific security measures, Røv notes that all of the company's payment procedures satisfy the requirements of international law as well as those of bank and credit institutions. The company is working to meet the industry's security standards as defined by ISO, ITIL, and other organizations.

Implementing BIG-IP LTM has also simplified the management of security certificates. The task is

significantly smaller because only the certificates for the F5 appliances, and not the certificates for every single server, need to be managed.

Røv adds that the F5 training, provided by the F5 Authorized Training Center Arecta Communications AB, has been excellent. "The comments from those who have attended the F5 training courses are unambiguous. People have said, 'It's the best course I have ever been to,'" he notes.

"Without F5 my job would have been much more complicated. We would have had more employee overhead and more management costs, while at the same time we would have had poorer hardware utilization," says Røv. "The F5 solution has exceeded all our expectations."

He points out that the extremely efficient and flexible solutions Komplet has experienced are proof that F5's dedication to application availability exceeds that of competitive solutions.

"The most important thing for any company deriving revenue from selling online is the purchasing experience we can offer our customers. F5 helps us stay up-to-date with what our customers are experiencing through reports on response time, memory use, traffic peaks, code issues, overall functionality, and much, much more," says Røv. "Two online stores can be equal in terms of their product line. The difference is the experience you have. F5 helps us improve that experience."

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