interNetwork AG

interNetwork AG Case Study

Intelligent Test Suite For Enterprise, Inter/Intranet And Telecom Networks

interNetwork AG was founded in 1999 in Wiesbaden, Germany, and the company positioned itself in one of the fastest growing markets in the world, load testing and quality assurance (QA) for IP networks. In October 2000, the U.S. headquarter was opened in Worcester, MA, near Boston. From the beginning, interNetwork AG developed and marketed sm@rtTEST, a load testing and QA solution for IP networks. Today, major telecommunications companies like Nexxia, T-Nova, and Deutsche Telekom benefit from using sm@rtTEST.

Although the company was new, the product had already evolved over years. It was originally developed for Deutsche Telekom, Germany's largest Telco and Internet carrier. Now, sm@rtTEST is interNetwork AG's flagship product. It is an intelligent test suite for entire mid- to large-range enterprise, inter/intranet, and telecommunication networks. This intelligent load testing suite helps to ensure a highly responsive system with a constant high quality of service for continuous business success.

The sm@rtTEST product suite provides unique capabilities for quality assuring networks and associated application infrastructure services. Those unique characteristics include the ability to test individual network devices, access/authentication protocol, and networking services. This is accomplished through the generation of real user traffic using light (or thin) client technology.

This thin technology allows cost-effective scaling to thousands of users, providing the opportunity to analyze the infrastructure under real life conditions. By using sm@rtTEST's unique protocol surveillance technology, quality assurance personnel can easily detect and isolate deficiencies in a complex system. The results are optimized network access in terms of price, throughput and concurrent users.

The sm@rtTEST product suite can be used both before and after deployment. This enables companies to design and test high-capacity networks prior to deployment. Once the network is online, they can react immediately to growing user demands through application probes to continuously monitor infrastructure response time and throughput.

SunTone (SM) Certified For Load Testing Applications Worldwide

interNetwork AG's sm@rtTEST version 1.9 is SunTone certified. interNetwork AG's solutions combined with Sun products like Solaris™ operating environment and Sun Ultra workstations have proven to be highly efficient.

Highlight 1:
interNetwork AG, www.internetwork-ag.de is involved in such markets as Internet service providers, telecommunications providers, network providers and hardware vendors.

Highlight 2:
The applications and solutions the company offers are load testing solutions for testing complete network infrastructures with regard to the load bearing capacities and pre-deployment testing and in-service monitoring.

Highlight 3:
interNetwork AG's business challenges are to isolate and remove deficiencies and performance bottlenecks, ensure a highly responsive network system prior to deployment, maintain a continuous high level of performance and availability and meet service level agreements.

Highlight 4:
interNetwork AG's business solutions are optimized price/performance ratio of distributed systems, guaranteed high Quality of Service, and Sun Microsystems solutions for scalable and high performance systems.

sm@rt Test V1.9 Load Testing Suite Helps To Create Cost-Effective Quality Networks

"InterNetwork AG is very proud to be SunTone (sm) certified for sm@rtTest V1.9 load testing applications worldwide. For the past few years, we have been overwhelmingly successful in supplying solutions for which we could rely on Sun's products. Our working relationship with Sun will help us to strengthen our leading position in the international market, since we will be able to provide scalable and highly reliable solutions to our customers for intelligent and complete network testing."

Karl Kipry,
President,
interNetwork AG

SunTone (sm) Certified For Load Testing Applications Worldwide

"By obtaining the status of SunTone certification, interNetwork AG underlines its competence and the high quality of its load testing environment," said Stans Kleijnen, Vice President, Market Development Engineering at Sun Microsystems.

"The customers of interNetwork AG can rely on the fact that sm@rtTEST meets the highest standards and works together with Sun hardware absolutely trouble free."

Till Immanuel Patzschke, CEO of interNetwork AG, said, "We enjoyed the highly professional exchange with Sun and the KeyLabs during the verification process. We are very pleased that our products and services are valued so highly by Sun."

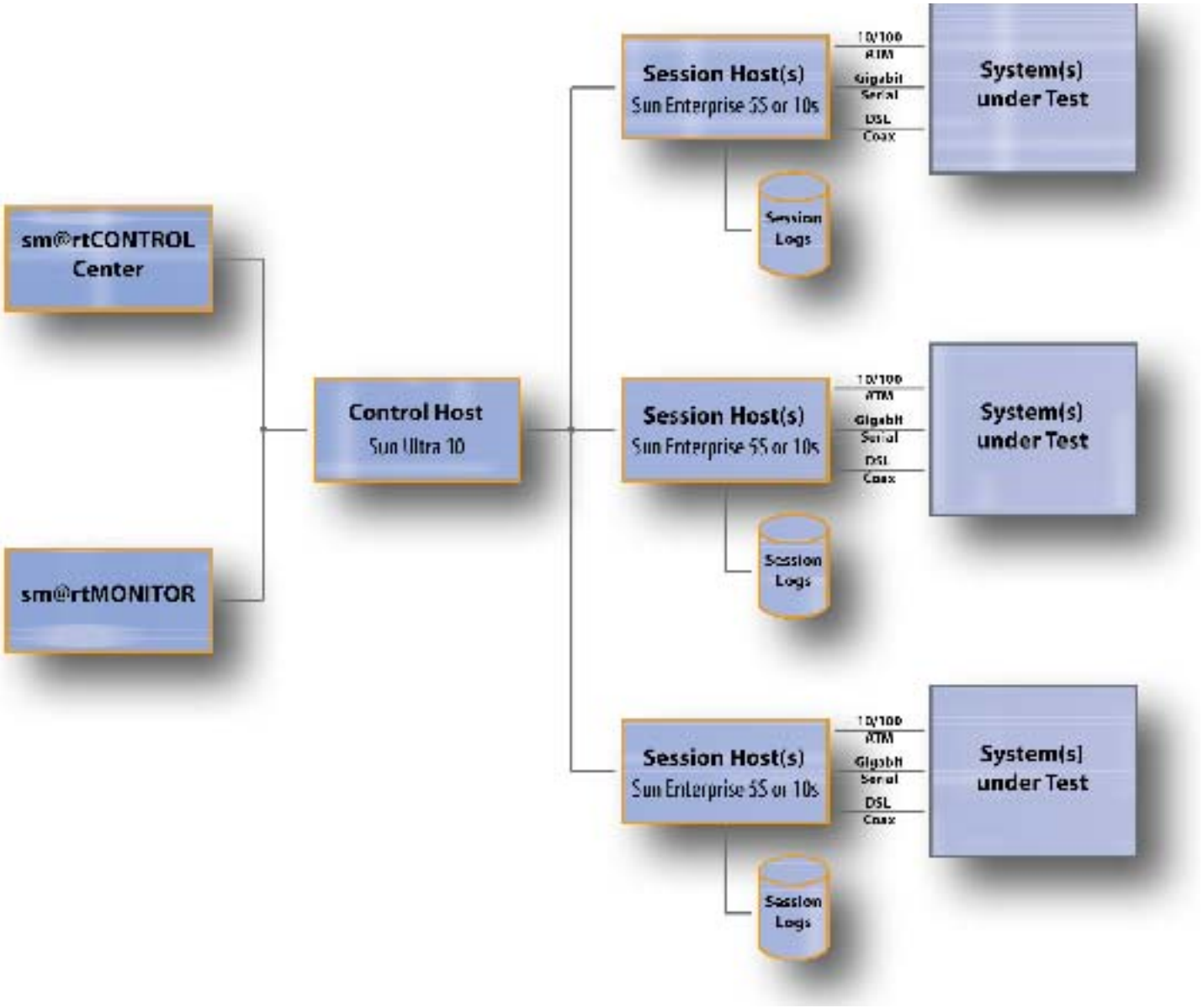
Patzschke added, "Sun Ultra stations, as well as the Solaris™ operating environment, allow an extremely high utilization of the network connection and provide enormous resources. Due to the sophisticated architecture of Sun products, the throughput and the bandwidth achieved in the testing process are immense."

Karl Kipry, President of interNetwork AG, said, "Sun and interNetwork AG are working toward the same goal - to be identified with quality, availability, and reliability. Sun helps us to generate business because the company is recognized with these attributes in the market, and because we will define products and services, which provide the valuable testing of network infrastructures and configurations." He further explained that interNetwork AG receives exceptional support from Sun both on the technical and on the sales side.

"This also includes the great support we received in the beginning when we came into the SunTone program, and we look forward to receiving support from Sun in terms of hardware for the further development of the product. In short, Sun helps interNetwork AG in many respects. Sun has an enormous market share in the Telco industry, and being SunTone certified opens the doors for us in a lot of cases," Kipry explained.

High-Level Network Testing With sm@rtTEST

High-level load testing with sm@rtTEST gives engineers comprehensive information about the performance of their entire system, including availability, response time, throughput and compliance. It provides information about the network and the network equipment by stress testing the application services, tunneling protocols and access/ authentication protocols. For example, individual network components can be tested to ensure that they can handle the type of traffic and volume for which they were designed.



sm@rtTEST Architectural Overview

In addition to basic usage like protocol throughput testing, sm@rtTEST delivers information about the ability of the network to respond appropriately to the data sent. sm@rtTEST emulates the behavior of real users. Automated scenarios allow it to stress the network and the networked applications under realistic conditions with an unlimited number of "virtual users," so-called “synthetic transactions.” The results gained from these tests are graphically displayed and allow engineers to isolate and remove deficiencies and performance bottlenecks in the network prior to and during deployment.

sm@rtTEST helps to safeguard investments in many ways. By tuning a system to its optimal performance, network operators can immediately reduce their costs. interNetwork AG customers also use sm@rtTEST to check whether or not a piece of hardware meets the vendor's promise before investing their IT dollars in a major installment. Also, these customers test and optimize the interoperability of various vendors' components. sm@rtTEST also hands customers the ability to test the compatibility of different protocol implementations. Further, they can predict the system's thresholds and its behavior, and tune it to their specific needs.

interNetwork AG Targets Different Market Segments

interNetwork AG's sm@rtTEST targets different market segments with different test requirements. Those segments are Telco, ISP, ASP, equipment manufacturer, enterprise, mobile operator, cable operator, integrator and consultant. Each has specific test requirements, and sm@rtTEST meets these test demands. For example, ISP test requirements run the full gamut: component, infrastructure, application protocol, application, video streaming, and QoS monitoring. Telcos and cable operators, on the other hand, have the same test requirements except for application testing.

interNetwork AG offers a variety of services to these market segments. These include: platform installation and verification, software installation and verification, training, sessions script development and customization, test scenario and user population definition, post-run analysis reports, implementation of new specific protocols and implementation of new on-line and off-line graphics.

Aside from these main services, interNetwork AG's sm@rtTEST has a number of key advantages compared to competing products. These include combining network monitoring, functionality and application and infrastructure testing. sm@rtTEST also performs intelligent load testing. This is from the end user's perspective based on real content and point-to-point testing. Other major advantages are: user load, end-to-end performance testing, high scalability, flexibility, ease of use and high efficiency to include intuitive GUI, script repository, links and templates. Since sm@rtTEST is based on an open platform, the user enjoys ease of feature and protocol extension, meaning there is no need for proprietary or cost-intensive standard or commercial hardware. Further, sm@rtTEST supports Layer 3 to Layer 7 testing in one tool, and it supports various protocols and access technologies, and in particular, a mixture of them.

"Sun and interNetwork AG are working toward the same goal-to be identified with quality, availability and reliability. Sun helps us to generate business because the company is recognized with these attributes in the market and because we will define products and services, which provide the valuable testing of network infrastructures and configurations."

Karl Kipry,
President,
interNetwork AG

Looking At New Methods To Improve Existing Infrastructure

Due to increasing demands, research departments at Telcos, software companies, and computer hardware manufacturers are searching for new methods to make better use of the existing infrastructure that involves copper and fiber networks in order to increase the overall throughput. There are typically two to five major protocols/access methods created every year, including, PPPoE, PPPoA, and GPRS in 1999. As new protocols and their advantages are recognized and adopted, service providers face increasingly complex infrastructures. Certain issues evolve as a result, and those center around questions dealing with right-sizing the infrastructure, optimizing the investment, providing guaranteed bandwidth, and controlling and monitoring the entire infrastructure.

interNetwork AG resolves those issues at the beginning. That's because sm@rtTEST is an extremely flexible load testing environment and is able to keep current with emerging protocols and technologies to offer a viable testing platform. This includes such technologies as L2TP, IPSec, VoIP, and IPV6.

Sun Microsystems, Inc. 901 San Antonio Road, Palo Alto, CA 94303-4900 USA 1-650-960-1300 or 1-800-555-9sun www.sun.com

AFRICA (NORTH, WEST AND CENTRAL): +33-13-067-4680 • ARGENTINA: +5411-4317-5600 • AUSTRALIA: +61-2-9844-5000 • AUSTRIA: +43-1-60563-0 • BELGIUM: +32-2-704-8000 • BRAZIL: +55-11-5187-2100 • CANADA: +905-477-6745 • CHILE: +56-2-3724500 • COLOMBIA: +571-629-2323 COMMONWEALTH OF INDEPENDENT STATES: +7-502-935-8411 • CZECH REPUBLIC: +420-2-3300-9311 • DENMARK: +45 4556 5000 • EGYPT +202-570-9442 • ESTONIA: +372-6-308-900 • FINLAND: +358-9-525-561 • FRANCE: +33-134-03-00-00 • GERMANY: +49-89-46008-0 • GREECE: +30-1-618-8111 HUNGARY: +36-1-489-8900 • ICELAND: +354-563-3010 • INDIA: BANGALORE: +91-80-2298989/2295454; NEW DELHI: +91-11-6106000; MUMBAI : +91-22-2018141 • IRELAND: +353-1-8055-666 • ISRAEL: +972-9-9710500 • ITALY: +39-02-641511 • JAPAN: +81-3-5717-5000 • KAZAKHSTAN: +7-3272-466774 • KOREA: +822-2193-5114 • LATVIA: +371-750-3700 • LITHUANIA: +370-729-8468 •LUXEMBOURG: +352-49 11 33 1 • MALAYSIA: +603-21161888 • MEXICO: +52-5-258-6100 • THE NETHERLANDS: +00-31-33-45-15-000 • NEW ZEALAND: AUCKLAND: +64-9-976-6800; WELLINGTON: +64-4-462-0780 • NORWAY: +47 23 36 96 00 • PEOPLE'S REPUBLIC OF CHINA: BEIJING: +86-10-6803-5588; CHENGDU: +86-28-619-9333; GUANGZHOU: +86-20-8755-5900; SHANGHAI: +86-21-6466-1228; HONG KONG: +852-2202-6688 • POLAND: +48-22-8747800 • PORTUGAL: +351-21-4134000 • RUSSIA: +7-502-935-8411 • SINGAPORE: +65-438-1888 • SLOVAK REPUBLIC: +421-2-4342-94-85 • SOUTH AFRICA: +27 11 256-6300 • SPAIN: +34-91-596-9900 • SWEDEN: +46-8-631-10-00 • SWITZERLAND: GERMAN: 41-1-908-90-00; FRENCH: 41-22-999-0444 • TAIWAN: +886-2-8732-9933 • THAILAND: +662-344-6888 • TURKEY: +90-212-335-22-00 • UNITED ARAB EMIRATES: +9714-3366333 • UNITED KINGDOM: +44-1-276-20444 • UNITED STATES: +1-800-555-9SUN OR +1-650-960-1300 • VENEZUELA: +58-2-905-3800 • OR ONLINE AT SUN.COM/STORE

LFC Printed in USA 02/02 BE1294-0/K

Sun microsystems
We make the net work.