



SIEN

To help government decision-makers channel state and municipal budgets where they are needed most, SIEN wanted to empower them with lightning-fast reporting and analytics capabilities. Today, SIEN is working with SUSE to deploy SAP BusinessObjects Planning and Consolidation on SAP HANA, running on the high-performance SUSE® Linux Enterprise Server for SAP Applications platform. In benchmarking, SIEN has cut some financial reporting processes from days to hours—ultimately supporting faster, better-informed decision-making.

Overview

Based in Neuchâtel, Switzerland, Service Informatique de l'Entité Neuchâteloise (SIEN) provides IT services for a range of public authorities across the region. These information and infrastructure services support everything from state and municipal government bodies to schools, healthcare providers and social services organizations. In total, SIEN serves more than 75,000 users with communications, network security and line-of-business application services.

Challenge

MAKING LIMITED RESOURCES GO FURTHER

Against the backdrop of a tough economic climate, state and local governments are under more pressure than ever to make limited financial resources go further. Faced with a growing and aging population, decision-makers for the canton of Neuchâtel need to quickly answer

questions such as: "Which services in the region need funding most?", "What might the impact be if we redirect some funding from one service to another?" and: "What are the likely long-term, systemic effects of the funding decisions we make today?"

Like many government organizations around the world, the canton of Neuchâtel relies on SAP business systems to support its financial planning processes. By calculating the resources available from revenue streams such as taxation, decision-makers can identify how much budget is available for functions such as law and order, health and social care, and public infrastructure.

SUPPORTING DECISION-MAKERS 24/7

SIEN is the organization responsible for delivering these mission-critical SAP applications, and ensuring they are available 24 hours a day, 365 days a year.

Andrea Rizzo, Head of Back Office Systems and Production at SIEN, said: "In the past, if one of our government customers wanted to run a financial simulation, performing the analysis could take as long as several days. If the team needed to adjust the parameters of the analysis—or if the process failed for a technical reason—then they would need to re-start the process. As a result, even apparently straightforward analytics tasks could rapidly become complex and time-consuming.

"Some reporting workloads that previously took up to three days to run on the old platform now complete within just two hours—97 percent faster."

ANDREA RIZZO

Head of Back Office Systems and Production
SIEN

Case Study

SUSE Linux Enterprise Edition 11 (x86_64) SP3
SUSE Linux Enterprise Server for SAP Applications



SIEN at a Glance:

SIEN is the IT service provider for public authorities in the Swiss canton of Neuchâtel, including state and municipal government, schools, healthcare providers and social services.

Industry and Location

Government, Neuchâtel, Switzerland

Product and Services

SUSE Linux Enterprise Edition 11 (x86_64) SP3
SUSE Linux Enterprise Server for SAP Applications

Results

- + Runs analytics jobs up to 97 percent faster, enabling deeper analysis to help government decision-makers contain costs
- + Delivers dependable availability, ensuring vital public-facing services are live 24/7
- + Protects mission-critical data and facilitates effective recovery in the event of unplanned downtime

“We wanted to empower our customers to make better-informed budget decisions, faster. To open the door to more sophisticated financial modeling and predictive analytics, we knew that a high-performance platform was essential.”

CHARTING A ROUTE TO LIGHTNING-FAST ANALYTICS

Previously, SIEN relied on an older version of the SAP BusinessObjects Planning and Consolidation application connected to Oracle and Microsoft SQL Server databases. The organization realized that upgrading to one of the latest versions of the SAP application would unlock the performance it needed.

“As a first step, our aim was to migrate to SAP BusinessObjects Planning and Consolidation 10.3,” said Andrea Rizzo. “We reviewed the infrastructure requirements for the new platform, and mapped out the changes required to achieve the target state. On the top of the list was deploying the SAP HANA in-memory database platform, which is a prerequisite for moving to version 10.3.”

Solution

SELECTING A ROCK-SOLID SERVER PLATFORM

To support its new SAP HANA database, SIEN selected SUSE Linux Enterprise Server for SAP Applications. The SUSE offering is an optimized operating system platform that is validated and certified by SAP for SAP HANA solutions.

“When we compared SUSE Linux Enterprise Server for SAP Applications with competing offerings such as Red Hat Enterprise Linux, the choice was clear,” said Andrea Rizzo. “While we had some experience with a Linux-like operating system from our time using the IBM AIX operating

system, we did not want to expose ourselves to the risk of deploying anything other than a proven platform.

“SUSE Linux Enterprise Server for SAP Applications is designed and developed in partnership with SAP, and certified to work with practically any SAP HANA installation—which gave us the confidence that the solution was the ideal choice to mitigate our risk. It also gives us peace of mind that we are joining the more than 95 percent of SAP HANA users who run the platform on SUSE Linux Enterprise Server for SAP Applications.”

Andrea Rizzo said: “Some parts of rarely accessed SAP HANA memory can be paged out by the kernel, and if users attempt to access this paged-out memory it can drive up response times. We saw the kernel tuning feature in SUSE Linux Enterprise Server for SAP Applications as an additional point in the solution’s favor, as it eliminates this potential issue by automatically prioritizing application memory when the page cache reaches a pre-defined limit.”

BUILDING A RESILIENT, HIGH-PERFORMANCE INFRASTRUCTURE

After making the decision to embrace the SUSE solution as its SAP HANA server platform, SIEN turned its attention to architecting the underlying compute, storage and networking infrastructure.

“From the outset of our analytics project, we were clear that we did not want to deploy SAP HANA as an appliance,” said Andrea Rizzo. “Instead, we targeted the flexibility of building our own virtualized infrastructure. As well as offering us more freedom to choose between storage, compute and networking technologies, we were confident that the build-it-yourself

route would help us to improve operational cost-efficiency and deliver a faster return on investment.”

To achieve its goal, SIEN decided to make use of the SAP HANA Tailored Datacenter Integration (TDI) program. The program enables SAP HANA customers to utilize selected hardware and infrastructure components while remaining within the standard support path.

SIEN selected two Dell PowerEdge R920 Rack Servers, each with 1 TB of memory and a combined total of 60 Intel Xeon E7 processor cores. To deliver low-latency storage performance, the organization deployed a Storage Area Network (SAN) based on NetApp arrays, networked with Brocade fabric technology. SIEN has virtualized half of its environment with VMware ESX Server and the other with Microsoft Hyper-V, configured for high availability. For data resiliency, the organization performs regular backups using the NetApp Snap Creator Framework.

ACHIEVING COST-EFFECTIVE COMPLIANCE

“To comply with the requirements for the SAP TDI program, it’s necessary to run dedicated, SAP-certified hardware, which is exactly what we have done,” said Andrea Rizzo. “During the deployment phase, we worked with an SAP HANA expert from Dell, who helped us to ensure that our five virtual machines are compliant with the terms and conditions of the SAP TDI program. This involved the engineer running a script in our environment to verify the installation, and sharing the results with SAP for final authorization.

“The configuration process for the compute, storage and virtualized components of our infrastructure was relatively straightforward; the Dell team helped us

to get up and running in just two working days. Configuring our backups was more of a challenge, but by working together with an engineer from NetApp, we successfully deployed the NetApp Snap Creator Framework to perform regular, live snapshots of our production environment—giving us the assurance that our data will be protected in the unlikely event of a disaster recovery scenario.”

Results

FASTER ANALYSIS, BETTER-INFORMED DECISIONS

SIEN has now completed its migration to SAP BusinessObjects Planning and Consolidation version 10.3, connected to SAP HANA running on the rock-solid SUSE Linux Enterprise Server for SAP Applications platform.

“Before we started this project, most of the use cases we had heard for SAP HANA revolved around the B2C world—for example, major players in the fashion industry refining data models in real time to identify shifting consumer trends, or large supermarket retailers with tens of thousands of stock-keeping units attempting to discover the optimal merchandizing strategies to maximize sales,” said Andrea Rizzo. “As a service provider in the regional government space, our need for real-time analysis isn’t quite as pressing as all that, but customer demands and expectations are certainly increasing.

“Today, we offer a catalog of more than 100 different services through a citizen-facing portal, which include demanding use cases such as electronic voting. Offering citizens the opportunity to access more of the services they need on the digital channel is an excellent way to increase convenience and accessibility as

well as containing costs, and as a result we are under pressure to become more responsive. Without a doubt, our in-memory analytics platform, supported by SUSE solutions, will help us to achieve that goal.”

SHAPING FUTURE-READY SERVICES

SIEN’s developers are now working with SAP BusinessObjects Planning and Consolidation 10.3 in a test environment, laying the foundation for lightning-fast analytics capabilities in the future.

“In-memory analytics is a paradigm shift for us, and we need to re-write a significant amount of code before the SAP solution is ready to go into production, currently targeted for Q1 2018,” said Andrea Rizzo. “Our developers could not be happier with the SAP HANA platform. In addition to delivering more IOPS and increased availability, the solution is delivering on the promise of in-memory analytics.

“Some reporting workloads that previously took up to three days to run on the old platform now complete within just two hours—97 percent faster. This increased performance will open up the possibility for our customers to perform in-depth what-if analyzes, and ultimately uncover more effective ways to budget across the region.”

ENSURING ROUND-THE-CLOCK AVAILABILITY

By deploying a virtualized, enterprise-class Linux server platform, SIEN is measuring higher levels of stability.

“Since we went live with our test environment, we have not experienced a single instance of unplanned downtime,” said Andrea Rizzo. “Because of the stability of our SUSE Linux Enterprise Server for SAP Applications environment, we have had no reason to call on the expertise of the

SUSE support team, but we feel secure in the knowledge that their guidance is only a phone call or an email away if we should ever need it.”

READY FOR THE FUTURE

Looking ahead, SIEN plans to migrate from SUSE Linux Enterprise Server for SAP Applications 11 Service Pack 3 to version 12.

“We continue to use our IBM AIX environment to run the SAP ERP applications, but we see great potential in the speed and flexibility of using our SUSE platform to perform some of those tasks in the future,” said Andrea Rizzo.

“By transitioning to SUSE Linux Enterprise Server for SAP Applications 12, we will gain the ability to use SUSE Linux Enterprise Live Patching to keep our system up to date without compromising uptime. We are also interested in the potential of SUSE Manager to deliver centralized control of our environment, enabling us to orchestrate tasks such as patching, system monitoring and asset management from a single point of control.”

In conclusion, Andrea Rizzo said: “Our customers face the tough challenge of being asked to do more with less, and as an organization, it’s our mission to give them the tools they need to overcome that challenge. Working with our partners at SUSE, Dell, SAP and NetApp, we are successfully building a future-ready analytics infrastructure that will empower decision-makers to shape effective strategies to contain costs and drive new efficiencies, both now and in the long term. With SUSE Linux Enterprise Server for SAP Applications as the dependable foundation for our SAP HANA platform, we are in a strong position to provide decision-support services for our government clients.”

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Head of Back Office Systems and Production
SIEN

www.suse.com



Contact your local SUSE Solutions Provider, or call SUSE at:

1 800 796 3700 U.S./Canada
1 801 861 4500 Worldwide

SUSE
1800 S. Novell Place
Provo, UT 84606

SUSE
Maxfeldstrasse 5
90409 Nuremberg
Germany