rku.it GmbH

To be prepared for next-generation enterprise software solutions, rku.it wanted to offer its clients cost-efficient and flexible SAP HANA services that can grow with their requirements. A key challenge was to keep the administration overhead low, while delivering new capabilities. To maximize operational efficiency, rku.it leverages SUSE Manager to centrally control a heterogeneous Linux environment and automate deployment across all systems, including SUSE Linux Enterprise Server for SAP Applications running on IBM Power Systems.

Overview

rku.it is one of the largest independent IT service providers for municipal utilities and public transport companies in Germany. rku.it's business goals are cost-efficiency, outstanding services and customer satisfaction. Many diverse clients of the company are also shareholders.

As a partner for its clients, rku.it aims to maintain long-term relationships. Offering state-of-the-art services at attractive price points allows everyone involved to maximize the benefits of the collaboration.

The energy market is changing fast and digitization is becoming more and more important – from running network infrastructure to delivering customer services. New technologies such as Smart Meter require more flexible, scalable and powerful IT solutions. rku.it already processes data from about 5 million Meter points. This number is only set to increase in the coming years.

To support its clients' business models of the future, rku.it launched its own InnoLab. A young team develops new solutions in growth areas, such as the Internet of Things (IoT), big data and data analytics, using an agile approach to innovation.

Challenge

New Demands and Shrinking Budget

In recent years, rku.it has seen its clients confronted with increasing cost pressures. At a time when end users are becoming more demanding and calls for additional flexibility are getting louder, rku.it's clients must respond to more complex IT requirements with shrinking budgets.

To deliver flexible services efficiently, reliable enterprise software is crucial for rku.it's clients in the utility and public transport sectors. Gearing up for upgrades to next-generation ERP solutions, rku.it wanted to be an early adopter of new solutions such as SAP HANA.

Benjamin Kaspereit, Head of Data Center Services & Systems Technology at rku.it, explains why it is necessary to always be one step ahead: "We need to offer our clients the services that they need to be successful tomorrow. For many of our clients, this means fully embracing the SAP product strategy to make the most of their business applications. The newest, modernized and streamlined SAP products increasingly build on the SAP HANA platform – so it was essential for us to build up the capability to deliver SAP HANA services to all our clients."

rku.it at a Glance:

rku.it is an IT service provider with clients all over Germany. Specializing in utilities and public transport solutions, rku.it offers a broad range of services, running SAP software for 13,000 users.

■ **Industry and Location**

Platform Provider, Data Processing Center, Application Consulting and Development Services. Development Services. Herne, Germany.

■ **Product and Services**

SUSE Linux Enterprise Server for SAP Applications
SUSE Manager

■ **Results**

+ *Provides reliable and scalable platform for next-generation business applications*
+ *Helps rku.it to offer new services cost-efficiently by aligning business and IT requirements*
+ *Supports a heterogeneous Linux environment with 130 servers across two processor architectures*

Competing with Cloud Offerings

Furthermore, rku.it is facing stiff competition from major cloud services that can leverage different economies of scale. To maintain the highest standards of quality, rku.it strives to operate IT services with a high degree of automation. This approach allows the company to overcome cost challenges with tight margins.

"The marketplace for IT services is crowded and we have seen new competitors entering the stage in recent years," remarks Thomas Kubitz, Data Center Services & Systems Technology at rku.it. "As an independent company, we don't take a single customer for granted. To guarantee the best level of service, we need to make the best use out of our resources. We are always looking for solutions to automate routine tasks, so our staff can concentrate on their workload to offer excellent, personalized customer service."

Solution

Leveraging a Reliable Platform

rku.it has many years of experience running mission-critical enterprise software for its clients. With a wide range of SAP applications available to 13,000 business users from more than 130 clients all over Germany, the company cannot afford any unplanned downtime or slow performance of business transactions. This is why rku.it relies on IBM Power Systems infrastructure to support the majority of SAP applications for its clients.

Benjamin Kaspereit says: "Our experience with IBM Power Systems has been very positive and we have never had issues with the reliability of the platform. When stability and availability is the key, we want to build on systems we already know. Our strategy is therefore to limit change in our data centers and to leverage the knowledge our staff already has."

IBM Power Systems has been rku.it's preferred platform for SAP workloads for many years. IBM Power Systems was the most flexible platform when it came to running virtualized environments of different sizes, tailored to meet the different clients' specific needs. This was partly due to vendor certifications and support restrictions, but also to the platform's virtualization features. IBM Power Systems allows more granular control of computing and memory resources than other platforms. This helps rku.it to allocate the optimal amount of memory in combination with the minimum compute capacity required to a particular virtualized instance, without wasting server resources.

To integrate SAP HANA on IBM Power Systems, a server for SAP Applications was required. With SUSE Linux Enterprise rku.it has chosen a validated and supported operating system.

"When we started looking at SAP HANA, we wanted to run it on the most reliable platform, running on a proven and well-supported operating system," remarks Thomas Kubitz. "Knowing that SAP also uses SUSE Linux Enterprise Server for SAP Applications internally, we decided that deploying it on IBM Power Systems would give us a future-proof option to provide new services to our clients without adding much new complexity to our operating processes."

To keep the number of different server models to a minimum, rku.it kept its tried-and-tested platform and deployed SAP HANA databases on four IBM Power System E850 servers in two separate data centers. Thanks to low-overhead virtualization using IBM PowerVM, rku.it can achieve a high instance density without compromising on performance. As a result of the smooth integration of SUSE Linux

Enterprise Server with the IBM POWER architecture, the company is able to take advantage of the advanced platform and virtualization features like Live Partition Mobility for improved availability of SAP HANA instances during maintenance.

SUSE, SAP and IBM have worked closely together to provide a seamless experience that combines the advantages of each individual component. Regarding the business aspect, rku.it's clients get to use the latest in-memory database platform from SAP for their transactional and analytical workloads. On the technical side, SAP HANA can make use of impressive memory bandwidths of the IBM POWER8 architecture and the simultaneous multithreading (SMT) processor feature, enabling the application to run eight threads per core and deliver consistent response time even under peak load. As all operations are performed in-memory, the comprehensive memory protection of the IBM POWER platform improves reliability and reduces business risk.

Benjamin Kaspereit adds: "With SUSE Linux Enterprise Server for SAP Applications running on IBM Power Systems, we can achieve higher SAP HANA throughput performance with fewer processor cores. This helps us to reduce data center requirements such as rack space, energy and cooling. And we can run more SAP HANA instances on a single system, enabling us to offer a more attractive service to our clients."

Stellar Support

rku.it regularly works with a wide range of software and hardware vendors and rated working with SUSE as one of its best experiences to date.

During the deployment, rku.it enjoyed close collaboration with the SUSE team, as

Thomas Kubitz notes: "Whenever we had any questions, we could always reach out to knowledgeable staff at SUSE. We were impressed with how easy it was to get to talk to subject experts and developers who had a deep technical understanding of the solution and could actually solve our problems quickly."

Benjamin Kaspereit confirms: "It was very encouraging to learn that we won't need to rely on slow, convoluted support processes, impersonal call centers and off-shore resources. We can just contact the local SUSE team in our local language, which makes communication easier and ensures that any issues are resolved more smoothly. Seeing this quality of support from a major Linux vendor demonstrated a high level of commitment and competency."

Learning with Industry Experts

rku.it doesn't just work closely with suppliers and partners, but also with peers. As an active member of the GUIDE SHARE Europe user group, rku.it participates in an active knowledge exchange, learning from other companies and sharing its own experiences with other members.

> **"Running SUSE Linux Enterprise Server for SAP Applications on IBM Power Systems allows us to offer new SAP HANA services cost-efficiently. We are well prepared to scale up our environment and help our clients to modernize their business systems."**

BENJAMIN KASPEREIT
Head of Data Center Services & Systems Technology
rku.it GmbH

GUIDE Share Europe is a leading IT knowledge network with local groups across Europe. The organization connects companies on a local, regional and international level through large conferences and smaller meetings, as Benjamin Kaspereit explains: "Through our involvement with the GUIDE SHARE Europe user group, we get information about new technologies, such as SAP HANA, earlier than other suppliers. Furthermore, we can use our own experiences, which give us an advantage at presentations and road shows. Exchanging ideas with industry experts also helps us to make technology decisions."

He adds: "Engaging with other companies who were already using SUSE Linux Enterprise Server for SAP Applications on IBM Power Systems for SAP HANA helped us gain a deeper understanding of this unique combination of products. And since deploying the solution ourselves, we have already started giving back by helping others to streamline their operations and upgrade their processes to make even more efficient use of their resources."

Managing Heterogeneous Linux Environments

By deploying SAP HANA, rku.it introduced SUSE Linux Enterprise Server to its data centers for the first time. To reduce the administration overhead of running two enterprise Linux distributions – SUSE Linux Enterprise Server and Red Hat Enterprise Linux – across two different processor architectures, rku.it looked to replace its existing management tool with a new solution.

Thomas Kubitz recalls: "When we made the decision to deploy SUSE Linux Enterprise Server for SAP Applications, we immediately started looking for options that would enable us to manage our different Linux distributions via a single web console."

The company evaluated various tools before deploying the only solution that offered central update, package and patch management across a heterogeneous Linux landscape: SUSE Manager.

With SUSE Manager, rku.it successfully integrated the management of 110 existing enterprise Linux servers with its new SUSE Linux Enterprise Server instances.

Benjamin Kaspereit notes: "Having a single management tool for our Linux system landscapes was the key to keeping operations costs low and avoiding fragmenting our management processes. Only SUSE Manager could offer this capability, so it was an easy decision for us."

Results
Running Business Applications Reliably
Since deploying SUSE Linux Enterprise Server for SAP Applications on IBM Power Systems, rku.it has been impressed by the stability of the operating system.

In the past, most of rku.it's clients' mission-critical SAP data were running on a UNIX operating system. At first, the company was not sure if it could achieve the same level of availability with Linux – but was proved wrong, as Thomas Kubitz explains: "Looking at our monitoring, we can clearly see that SUSE Linux Enterprise Sever for SAP Applications is very reliable and we have not had any issues with the availability or performance of our production systems.

"During the initial implementation, the support from SUSE has been outstanding. Working together, we were able to find a quick solution to any problem. As the largest independent open source company, SUSE is a great match for rku.it – one of the largest independent service providers in Germany for the utility and public transport sectors."

> **"Getting a single tool for all 130 Linux systems was important for us to maximize staff efficiency. This enables us to manage more Linux systems with the same team of administrators – a great competitive advantage for rku.it."**
>
> **THOMAS KUBITZ**
> Data Center Services & Systems Technology | rku.it GmbH

Contact us at:
www.suse.com

SUSE ensures a highly reliable system for SAP workloads by working closely with SAP. By offering a dedicated update channel for SAP applications, SUSE can deliver tuned and tested packages that ensure the best performance for SAP HANA and other SAP software.

Being validated by SAP on IBM Power Systems, SUSE Linux Enterprise Server for SAP Applications ticks all the boxes and gives rku.it the flexibility it needs, as Benjamin Kaspereit notes: "SUSE Linux Enterprise Server gives us all the major benefits of the IBM Power Systems platform, including advanced virtualization and reliability features. For example, we can adjust required resources more quickly and easily than on other platforms."

Aligning IT Systems with Business Requirements
Beyond reliability, using virtualization to pool resources and ensure appropriate sizing of instances for different customers was a central concern in order to provide the new services cost-efficiently, as Thomas Kubitz summarizes: "We are familiar with several different virtualization environments and running SAP HANA with SUSE Linux Enterprise Server for SAP Applications on IBM Power Systems gives us the most flexibility and control."

Thomas Kubitz continues: "In-memory databases have very particular performance requirements, so we need to assign the instances a lot of memory – but often they do not need many computing resources. IBM PowerVM helps us to use our server systems more effectively, so we can run more SAP HANA instances on a smaller

system footprint and align the sizing with the business requirements more closely."

Simplifying Administration Tasks
rku.it highly values the fact that SUSE not only tests all updates for compatibility issues with SAP software, but also offers additional tools to help rku.it with everyday administration and management tasks.

Benjamin Kaspereit says: "For certain activities, we need to follow detailed procedures to minimize disruption for production systems. SUSE offers installable packages that guide you through all the necessary steps in the best sequence. We use this approach to perform SAP HANA cluster system upgrades with near-zero downtime. By using the SUSE wizard, we minimize the risk of human error."

In addition to specialized tools, SUSE Linux Enterprise Server for SAP Applications integrates seamlessly with rku.it's SUSE Manager solution.

Managing Heterogeneous Environments
Thanks to SUSE Manager, rku.it continues to rely on just a single tool to manage two different enterprise Linux distributions. The company takes advantage of the highly flexible and powerful built-in package manager to customize and automate system administration processes.
"SUSE Manager was the only solution on the market that lets us manage SUSE Linux Enterprise Server and Red Hat Enterprise Linux on both x86_64 and POWER systems with a single tool," says Thomas Kubitz. "Having a single tool for all 130 Linux systems was important for us to maximize staff efficiency. This enables

us to manage more Linux systems with the same team of administrators – a great competitive advantage for rku.it. SUSE Manager is intuitive and very easy to use, cutting down the time it takes to keep our Linux servers current and secure."

rku.it is currently preparing for another major upgrade of its Linux environment. Once again, SUSE Manager will play a central role in automating the process and minimizing the manual work required.

Benjamin Kaspereit concludes: "Running SUSE Linux Enterprise Server for SAP Applications on IBM Power Systems allows us to offer new cost-efficient SAP HANA services. Until now less than 10 percent of our SAP applications rely on SAP HANA, but we expect significant growth in this area in the coming months. Thanks to SUSE and IBM, we are well prepared to scale up our environment as needed to support operations and help our clients to modernize their business systems. We are very satisfied with SUSE on IBM Power Systems and are planning to keep this winning combination for our next infrastructure renewal as well."

For more information
To learn more about products and services from rku.it, visit **www.rku-it.de** or call +49 2323 3688-0.

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