



## Case Study

SUSE OpenStack Cloud  
SUSE Enterprise Storage

# FIS-ASP

Hosting provider FIS-ASP wanted to seize new business opportunities and broaden its service offering to address the evolving requirements of its customers, while also increasing efficiency. With a highly automated cloud computing platform based on SUSE® OpenStack Cloud and SUSE Enterprise Storage, FIS-ASP streamlined its system delivery processes to get new systems up and running in days instead of months. Standardizing customer deployments on SUSE Linux Enterprise Server helps the company improve performance and productivity.



### Overview

FIS Group is a certified SAP partner and developer of a leading solution for the technical wholesale industry with clients predominantly from Germany, Austria and Switzerland. The group serves more than 300 customers and in total over 35,000 SAP users worldwide. FIS provides consulting and technical support to guide the implementation of SAP standard software, and also offers additional customization and implementation services for a range of industries. Headquartered in Grafenrheinfeld, near the German town of Schweinfurt, FIS operates four locations in Germany, one in Poland and another in the UK, employing approximately 650 people in total.

One of the Group's subsidiaries is FIS-ASP Application Service Providing und IT-

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**MATTHIAS BRAUN**

Head of Delivery SAP  
FIS-ASP

Outsourcing (FIS-ASP), which offers application hosting, outsourcing and out-tasking services. FIS-ASP employs around 100 people and focuses on SAP application hosting and operations.

### Challenge

FIS Group is a one-stop-provider for SAP solutions—supporting customers of all sizes across a broad range of industries, including the public sector. The company's portfolio includes a long list of SAP offerings, from the traditional ERP applications to the latest solutions, such as the SAP HANA in-memory database, the SAP S/4HANA next-generation ERP software, the SAP Hybris e-commerce solution and the SAP Fiori platform for mobile apps.

FIS Group has continuously widened the selection of available solutions by branching out into new fields, growing into new markets and acquiring innovative companies in promising segments. This has made providing reliable services efficiently difficult to achieve without increasing staff levels across all IT and data center teams substantially. To support its business strategy, the group's hosting specialist FIS-ASP needed to find ways to provide high-quality, scalable services to an increasing number of customers while also keeping on top of a growing solution portfolio.



### FIS-ASP at a Glance:

*FIS-ASP Application Service Providing und IT-Outsourcing hosts mission-critical systems for more than 35,000 SAP users and is part of FIS Group, a certified SAP partner focusing on technical wholesalers in Germany, Austria and Switzerland.*

#### ■ Industry and Location

Computer Services, Germany

#### ■ Product and Services

SUSE Enterprise Storage  
SUSE OpenStack Cloud  
SUSE Consulting  
SUSE Linux Enterprise High Availability Extension  
SUSE Linux Enterprise Server  
SUSE Linux Enterprise Server for SAP Applications  
SUSE Linux Enterprise Server for VMware  
SUSE Studio

#### ■ Results

- + Accelerates complex system deployments from between 40 and 60 days to just two or three days
- + Enables use of commodity hardware, unlocking cost savings of around 50 percent
- + 20 percent less time spent on administration compared with other operating systems

Matthias Braun, Head of Delivery SAP at FIS-ASP, says: “Recognizing the future potential of cloud technology to support more efficient operations, we started to embrace private cloud platforms early on. In doing so, we also gained first-hand experience of some of the reliability and operational challenges in this area.

“Currently, the development of the entire FIS group is very dynamic with many new projects, products and services being launched in parallel. As we broaden our horizons, it is essential for us as a hosting provider to ensure that rising demands and complexity do not eat into our profit margins. We need solutions that truly help us to manage our booming portfolio effectively with a low manual administration workload.”

## **Solution**

### **A RELIABLE PLATFORM FOR SAP APPLICATIONS**

FIS-ASP has a long history of running SAP software on the SUSE Linux Enterprise platform. Beginning in 2007, the company started to simplify its system architecture by running major systems including SAP applications and their underlying databases on SUSE Linux Enterprise Server for SAP Applications. Based on its positive experience with the SUSE platform, FIS-ASP began to move additional mission-critical systems to SUSE Linux Enterprise Server in 2010. To minimize the risk of disruption and ensure continuous services, the company deployed cluster systems using the SUSE Linux Enterprise High Availability Extension.

Matthias Braun adds: “We have always been very satisfied with the stability and performance of SUSE Linux Enterprise Server for SAP Applications. Over many years, we have been able to see the development and also experience how closely SUSE works together with SAP to deliver a reliable platform for the SAP solution

portfolio. This ultimately led to our decision to promote SUSE Linux Enterprise Server for SAP Applications as our standard platform, and to encourage our customers to migrate their largest and most important applications from costly proprietary UNIX environments to the SUSE Linux Enterprise platform running on more cost-efficient commodity x86 hardware.”

With customers today increasingly also requesting SAP HANA in-memory technology, FIS-ASP offers virtualized SAP HANA instances based on VMware vSphere virtualization supporting SUSE Linux Enterprise Server for SAP Applications.

### **ACCELERATING OPENSTACK IMPLEMENTATION**

Having determined that OpenStack offered the most suitable private-cloud environment for its needs, FIS-ASP initially planned to deploy the vanilla open source components without support. Its early experience with the technology, and in particular the complexity involved in setting up and tuning all of the different components, suggested that a better route would be a vendor-supported distribution. Based on the company’s positive experience with other SUSE products, FIS-ASP chose to deploy SUSE OpenStack Cloud in order to accelerate the implementation and improve reliability and performance.

Today, FIS-ASP is focusing on gradually standardizing its systems on SUSE OpenStack Cloud running on HPE infrastructure. For virtualization within OpenStack and also beyond, the FIS-ASP relies on SUSE Linux Enterprise Server as both host and guest operating system in combination with KVM and Xen virtualization technologies.

The advanced orchestration capabilities of SUSE OpenStack Cloud have enabled FIS-ASP to streamline deployment processes. This benefit is amplified by the

company’s use of SUSE Studio™ to create highly customized operating system images that include all relevant applications and configurations for quick and easy installations, further reducing the need for manual work.

Matthias Braun elaborates: “The OpenStack orchestration engine, called Heat, enables us to provision new resources faster. We defined a number of standard configurations in templates and can now roll out new environments very easily. SUSE OpenStack Cloud then automatically sets up all relevant instances and network configurations needed for a particular environment. An additional benefit of defining infrastructure as code in templates is the higher level of standardization that this enables.”

FIS-ASP is using the automated deployment and configuration framework in SUSE OpenStack Cloud, based on Crowbar and Chef, to quickly and easily manage its cloud infrastructure. The company is also evaluating additional open source tools to further automate the configuration and management of deployed instances. By combining infrastructure automation and software configuration, the company can also leverage built-in SUSE system management tools such as YaST® and Zypper to install additional software as needed, for example, the MongoDB NoSQL database. Through this comprehensive process automation, FIS-ASP can provision new cloud resources for customers faster and with less effort, providing better service and boosting operational efficiency.

Matthias Braun resumes: “We have selected SUSE OpenStack Cloud as the foundation for many of our services, because the platform is extremely reliable and helps us to establish standardized deployments more strictly and consistently, which helps us to reduce the overall administration workload. We are bringing more customers

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onto the cloud, because it offers a great way for us to deliver them reliable services cost-effectively. SUSE OpenStack Cloud is particularly useful for deploying test and development systems, which need to be up and running quickly.

“Another advantage for us of using SUSE software is that our cloud platform runs on the same foundation as our dedicated servers: SUSE Linux Enterprise Server. This homogeneous approach increases business agility, as we can easily migrate systems between the cloud platform and dedicated servers with little customization, giving us and our customers greater flexibility.”

#### **BUILDING ON FLEXIBLE, COST-EFFICIENT DATA STORAGE**

More recently, FIS-ASP has also begun taking advantage of SUSE Enterprise Storage™, a software-defined storage solution based on Ceph that integrates smoothly with SUSE OpenStack Cloud.

Matthias Braun says: “When thinking about modernizing and expanding our storage environment, we felt that the traditional appliance approach would be restrictive; instead, we wanted to run open source storage software flexibly on inexpensive commodity hardware. In the past, if we wanted to expand our storage capacity, we had to invest significant funds in purchasing additional appliances, a solution that did not scale cost-efficiently with our business growth. Building on our close collaboration with SUSE, we selected SUSE Enterprise Storage. The setup was easy: highly competent specialists from SUSE Consulting helped us to deploy a reliable and fast storage environment in which the performance is fine-tuned to meet our specific needs.”

Additionally, SUSE Enterprise Storage gives FIS-ASP a modern user interface for managing its storage environment. The

solution also features advanced functionality such as support for the iSCSI protocol—for example, to connect VMware instances directly to storage over the network. Features like this will help the company consolidate storage systems and respond faster to customer demands, contributing to higher service quality.

Matthias Braun sums up: “We are very pleased with SUSE Enterprise Storage, which delivers 50 percent lower costs along with high performance and availability. There’s a good chance that we will choose to standardize all our storage capacity on SUSE Enterprise Storage in future.”

#### **Results**

##### **DEPLOYING NEW SYSTEMS RAPIDLY**

Previously, when FIS-ASP was managing systems manually, it typically took between 40 and 60 man-days to set up complex landscapes for customers, such as those featuring SAP S/4HANA applications, SAP Fiori, SAP Hybris and SAP Business Warehouse. A lot of that time was invested in basic configuration and integration with the client’s set of SAP applications and FIS’ own inventory management solution.

By taking advantage of SUSE OpenStack Cloud, FIS-ASP can now complete the same kinds of deployments in just five or ten days. This acceleration is achieved by using standard operating system images, and then simply provisioning the required resources using those images. Additional tools like Salt can help with configuration and perform customization, or even connect applications to system monitoring and backup solutions.

Matthias Braun says: “With SUSE OpenStack Cloud, we can set up individual systems in two or three hours, rather than two or three days, because the SUSE platform removes a lot of the simple and repetitive

manual work. Some configurations we can already deploy at the push of a button.

“When we need to deploy multiple similar systems, we can create images once with SUSE Studio and then reuse the same images again and again in SUSE OpenStack Cloud, helping us meet customer requirements faster and provide better service. Ultimately, the SUSE solutions help us to provide a growing number of IT services more efficiently, and to boost service quality.”

##### **REDUCING ADMINISTRATION WORKLOAD WITH STANDARDIZED ENVIRONMENTS**

FIS-ASP has found that SAP applications run more reliably and with greater performance on SUSE Linux Enterprise Server for SAP Applications compared to other operating system platforms. By standardizing on this variant of SUSE Linux Enterprise Server, FIS-ASP plans to unlock additional savings for its operations—and also its customers.

“We are gradually moving away from UNIX and Windows, as SUSE Linux Enterprise Server for SAP Applications has become our platform of choice for new deployments,” says Matthias Braun. “The SUSE operating system runs very well on our HPE hardware: HPE and SUSE have gone to great lengths to ensure their products work together smoothly. Additionally, SUSE has a very close relationship with SAP, and many new SAP offerings, such as SAP HANA, are available first on SUSE Linux Enterprise Server for SAP Applications. That’s really important to us, because our entire business is centered on helping our customers innovate in their industries by using the latest tools and applications available to gain a competitive edge.”

He adds: “With operational cost being a major driver of innovation at FIS-ASP, it is crucial that SUSE Linux Enterprise Server

**“Building on our strong relationship with SUSE and SAP, and knowing that SAP itself trusts SUSE to run its own cloud platforms, we are confident that SUSE OpenStack Cloud will help us to strengthen our competitive advantage and increase customer satisfaction further.”**

**MATTHIAS BRAUN**  
*Head of Delivery SAP  
FIS-ASP*

[www.suse.com](http://www.suse.com)

runs so well on commodity x86 hardware. We estimate that infrastructure costs work out between 10 and 40 percent lower than running platforms such as UNIX on proprietary hardware,” says Matthias Braun.

“Relying on SUSE Linux Enterprise Server also simplifies system management. We estimate that you need to spend between 10 and 20 percent less time on administration tasks with SUSE Linux Enterprise Server compared to Windows. As an employer, another important consideration for us is to be able to get qualified personnel. Experienced Linux administrators are readily available on the labor market, whereas if you run a more proprietary and specialized infrastructure and operating system platform, it can be very difficult to find staff with the right skills to manage it.”

With its customers increasingly relying on a range of hosting and cloud services, FIS-ASP also values the capability of building hybrid cloud solutions. Applications running on SUSE OpenStack Cloud can easily connect to public cloud services like SAP Cloud Platform to take advantage of third-party services.

#### **RUNNING MICROSERVICES ON OPENSTACK**

FIS-ASP also relies on the dynamic SUSE OpenStack Cloud platform to run the group’s new iRetPlat service using a

flexible microservice architecture. This allows the team to deploy new features flexibly and scale the environment quickly to grow with its customer base and avoid paying for unused server resources.

Matthias Braun concludes: “SUSE OpenStack Cloud greatly facilitates our business strategy of continually adding new offerings to our portfolio, and it reduces the time to market. The flexibility and performance enable us to establish truly agile workflows within development teams. We are looking forward to developing and running other innovative services on SUSE OpenStack Cloud in the future.

“In summary, SUSE OpenStack Cloud and SUSE Enterprise Storage help us to deliver better customer service with faster provisioning of complex SAP landscapes. The automation and standardization efforts enabled by SUSE OpenStack Cloud are essential to ensuring that we can offer our services cost-efficiently to a growing number of customers. Building on our strong relationship with SUSE and SAP, and knowing that SAP itself trusts SUSE to run its own cloud platforms, we are confident that SUSE OpenStack Cloud will help us to strengthen our competitive advantage and increase customer satisfaction further.”



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