



Heraeus

Warp Speed into the Public Cloud

Heraeus is migrating its SAP systems from its own data center to Amazon Web Services (AWS) with the support of Syntax

Heraeus

Heraeus, the family-owned technology concern from Hanau, is a global leading portfolio company. With roots stretching back to 1660, the company originated as a family pharmacy. Today, Heraeus brings together a number of businesses in areas of the environment, electronics, health and industrial applications. Its customers benefit from innovative technologies and solutions based on broad expertise in materials and leading technologies. The FORTUNE Global 500-listed group posted total sales of €31.5 billion in 2020 and employs some 14,800 people in 40 countries around the world. Heraeus ranks among Germany's top ten family businesses and is a leader in its global sales markets.



For many years, the technology group Heraeus has operated its SAP systems with an in-house team in its own data centers. However, both the data centers and internal infrastructure had grown outdated and the company was faced with three options: “Either build entirely new facilities, co-locate, or move to the public cloud” recalls Thomas Stephan, Head of IT Infrastructure at Heraeus. Following an in-depth market analysis and consideration of the company’s own business continuity needs, the decision was reached to seek a public cloud solution. “Nowadays, in-house data centers are no longer the value-creating USPs; factors like the flexibility and scalability offered by the public cloud are much more important.”

Casting the net for a capable partner

Thomas Stephan and Oliver Löffert, Heraeus’ Head of Competence Center for SAP Basis and Interface, formed a team to seek out a suitable implementation partner. After a busy preparatory phase that included discussions with analysts, dialogue with user communities and sharing experience with other companies, Heraeus settled on a short list of seven providers that were invited to tender. “Our aim was to identify the most appropriate hyperscalers at the same time,” explains Oliver Löffert. “We asked each of the IT service providers to present a proposal for the best hyperscaler and outline their practical experience in working with these infrastructure providers.”

Experience with SAP and cloud expertise

Syntax played a number of trump cards that helped it win the contract. First of all, it has all the SAP capabilities of an IT service provider that has been looking after SAP systems of industrial customers ever since the Walldorf-based ERP provider delivered its first software. However, it was Syntax’s cloud expertise and proven partnership with AWS that really helped it stand out. “Syntax was open and honest from the start, telling us what works and what doesn’t. We could sense the company’s technical expertise and realized that this was a partner that we really wanted to work with,” reveals Thomas Stephan. “Syntax then also convinced us that AWS was the best hyperscaler for our needs.” Since Heraeus already relies on Microsoft Azure Cloud for other parts of the operation, the course was set for a multi-cloud solution. This proved to be the preferred configuration for Heraeus, since the company was not keen to become dependent on a single cloud provider.

Over 40 SAP systems migrated in less than a year

Once this initial step had been completed, the partners quickly got down to work, in virtual environments due to the pandemic. “It’s crazy when you think about it. We didn’t meet face to face at all throughout the entire project, but everything worked out great,” reports Oliver Löffert. “To help get to know each other and build a team, the project team from Heraeus and Syntax did, however, take part in a joint virtual Escape Room activity together.”

Keeping up the pace was vital when it came to completing the project, since the final deadline was non-negotiable. “The building that accommodated one of the old data centers was slated for demolition,” explains Thomas Stephan. “We had to vacate it within less than 12 months, no room for maneuver.”

Migrating more than 40 SAP systems to the cloud in less than a year is an ambitious schedule, which everyone was aware of. “Some people were a bit dubious,” says Thomas Stephan with a grin. “But we and our partners at Syntax knew that it was possible and that we would manage it together.”

Complex systems, huge in-house SAP expertise

The SAP landscape at Heraeus that had to be migrated was a mish-mash of many years of development. Some of the systems were running traditional databases while others had already moved over to SAP HANA and Linux. The largest system has around four terabytes of data and more than 500 interfaces, with 6,000 users in more than 40 countries. In addition, Heraeus’ precious metals business meant the company has countless in-house systems that do not exist anywhere else in the commercial world. The migration to the public cloud needed to satisfy the objective of harmonizing systems, with a switch to the Linux platform and database migration to HANA, without compromising the strengths of the SAP landscape that had been tailored to Heraeus’ needs.

Heraeus wanted to continue managing its own SAP landscape. “It is important to us to retain our independence and give ourselves space to develop,” explains Thomas Stephan. “We clearly have masses of SAP expertise in our organization and we know our own SAP processes like the back of our hand.”

Challenges of the AWS operating environment

As a result, a truly joint project was established into which Heraeus and Syntax contributed equal measures of capability and experience as partners. The start took the form of a design phase (the Assess phase) during which the team refined the proposal from the tender, and added further detail to the objectives and methods. The next stage was planning, including a range of proofs of concept, scheduling and distribution of the project into three migratory waves split over the year (the Mobilize phase). This stage of the planning involved close coordination with the different business divisions so that the migration windows could take account of their daily operational needs.

Next came the construction of the operational SAP environment in the AWS cloud, a task that demanded both SAP and cloud experience. “Implementing the basis architecture, performance targets, security aspects, business continuity and much more besides in a specific cloud setup is a truly complex task that demands experience as well as the willingness to explore new territory,” summarizes Thomas Stephan. Syntax’ mixture of cloud and SAP expertise in this instance was invaluable and we tried out things together, rejecting some, rethinking others and trying them out again. It all progressed in an atmosphere of real partnership.”

When the actual migration started with the first wave, things really started to hot up. “We went for a broadside and migrated five system landscapes to AWS in one move, bringing them all up and running,” explains Oliver Löffert.

“We deliberately held back on our biggest system so that we could gain experience and adapt the details of our plans.” The second wave went ahead in the summer before three major systems all moved to the new environment without any issues in the third wave in the autumn. The BW system environment was the final one to be migrated.

Measurably better performance

From the users’ perspective, the migration happened on schedule with no major impacts, generally at the weekend as well as immediately before the Golden Week, when Chinese public life all but comes to a halt. Nevertheless, the users did notice that something had changed. “We got faster,” smiles Oliver Löffert. “The reason is that we are now running fully on HANA, with the in-memory database. And of course the AWS hardware is more up to date than the kit that was installed in our old data centers.” In addition, the Linux service levels have improved and back-up and restore processes are also faster. “Also, our business continuity has gone up a level thanks to the greater distance between data centers,” says Thomas Stephan. “AWS was the only provider that could promise us that advantage during the tender process.”

Syntax supports system management

The cooperation between Heraeus and Syntax continues post completion of the migration project. Part of the tender was reserved for three areas that the company wishes to outsource so that it can focus more on managing its SAP basis environment. As a result, Syntax will now not only manage the operating system and back-ups, but will also take responsibility for hyperscaler management for the next three years at least. “AWS is new to us and we first need to build up our own expertise in this area,” Thomas Stephan acknowledges. “We are happy that it is in good hands with Syntax and can be certain that we are getting the most out of our investment in the AWS cloud.”

„As a partner, Syntax doesn’t try to pull the wool over your eyes; they will tell you what works and what doesn’t, in simple terms. The team is well motivated, with a good mix of technical expertise and a solutions-driven approach. Our experience demonstrates that Syntax simply want to achieve successful projects in partnership with their customers, cooperating as much as possible.“



Oliver Löffert

Head of Competence Center SAP Basis & Interface
Heraeus

A partnership of equals

The cooperation with Syntax has certainly turned out well for Heraeus. “We sometimes have to give ourselves a tap on the back for choosing the set-up the way we did,” smiles Thomas Stephan. “Seriously, Syntax, AWS and Heraeus are a very good combination. We could not have wanted more in terms of the experience of working together and sharing expertise as equal partners.”

Thomas Stephan believes care in selecting the implementation partner and hyperscaler is also an aspect that he would urge other companies to pay close attention to. “Especially in an area that is very new to many companies, it gives you an essential basis for moving forward.”

„Cooperation between Heraeus and Syntax is characterized by a high degree of professionalism and equal partnership. Any issues that arise are resolved calmly and quickly, with no blame games.“

Thomas Stephan
Leiter IT Infrastruktur
Heraeus

Cloud means change

When asked about his experiences of the project, Thomas Stephan says it is important that companies work hard on how to deal with the wave of changes that the move to the cloud entails.

“Employees need to learn new things and capabilities. They need greater architectural expertise but a number of operational tasks are no longer necessary. Training programs are vital along with an awareness that a cloud migration is not just another IT project. It is a project for comprehensive change that needs to be approached and managed accordingly.” The extent of the preparations, from selection of partners to the actual planning and scheduling, cannot be underestimated in the Heraeus team’s opinion. “Much of what we encountered when it came to putting SAP in the cloud was new and required a very structured approach,” emphasizes Oliver Löffert. “For example, at the start of the project we cut short the design phase to save time. I wouldn’t do that again – the time we gained was lost later on and it meant a lot of stress too.”



ABOUT SYNTAX

Syntax is a globally active IT service provider and a leading provider of managed cloud solutions for enterprise-critical applications. The company was founded in 1972 in Montreal, Canada. In March 2019, the former Freudenberg IT (FIT) and US AWS-specialist EMERALDCUBE joined the Syntax organisation as two established IT businesses.

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