

HPE is trying to rethink cloud functionality

Paradigm: Cloud

If you think about what the term “cloud” really means, hyperscalers and subscriptions fade into the background. Not the location or the licensing model is important, but rather the functionalities that users benefit from. Hewlett Packard Enterprise (HPE) thinks so as well.

An opinion piece by Peter M. Färbing, Editor-in-Chief, E-3 Magazine

What could the cloud mean for an ERP system? What could be the best cloud for Hana and S/4? The answer can be found on one of my t-shirts: There is no place like 127.0.0.1! Translated loosely: Home Sweet Home! This IP address is found in every server and refers to itself. While the server finds a Google service under the internet address 8.8.8.8, 127.0.0.1 always leads back to itself. This can be quite important for testing, among other things.

The perfect cloud for SAP S/4 Hana has to be a safe haven for the ERP system. A place to relax, abundant with storage and computing power. Referring to 127.0.0.1: My home is my castle! Hewlett Packard Enterprise (HPE) took that literally and built a safe home for IT applications like S/4 and database Hana - naturally using cloud technology. However, the result hasn't been another cloud-cuckoo-land, but rather a very real IT infrastructure with built-in cloud functionality. The HPE cloud paradigm differen-

tiates itself from other models by bringing the cloud functionality - the architecture - to the user and giving them the freedom of choice regarding their infrastructure. The S/4 cloud can therefore build a home in customers' own data centers, in hosting solutions, in bought and leased hardware, at HPE itself... the possibilities are endless.

While this approach might seem logical, almost no one has dared to go into that direction yet. The underlying question: Why does cloud functionality, meaning the architecture concept, always have to be bound to a specific infrastructure, meaning hyperscalers or SAP? Owning hardware doesn't have to be a disadvantage, and neither does building and optimizing your own data centers. Maybe a company has just built a new data center in close vicinity to its factory to keep the latency of its IIoT applications as low as possible. Why would this company now risk it all for a shiny new home in the cloud?

However, no one wants to miss out on the speed and flexibility of cloud deployment models. Hana servers for development and testing have to work in real time. When push comes to shove, S/4 needs enough hardware resources to scale according to demand. There are various examples of ERP requiring cloud functionalities. Granting S/4 Hana's data structures and algorithms a secure and comfortable infrastructure as well as a state-of-the-art cloud architecture is a prerequisite for digital transformation. With GreenLake, HPE has mastered this cloud paradigm.

Conclusion: There is no place like GreenLake. Combining the cloud and S/4 Hana architecture with the perfect IT infrastructure regarding specific customer requirements is the perfect example for a successful digital transformation. If SAP stopped relying on “Cloud Only” and started thinking along those same lines, a lot more SAP customers might be willing to switch to “cloud” and accept S/4 and Hana.

Stay in your own data center and still move to the cloud

Rise With HPE

What can SAP customers do if they do not want to migrate to a public cloud, but also do not want to miss out on the benefits of the cloud? They leverage cloud in their own data centers. But in that regard, there are some key differences to consider.

By Mike Wenner, Hewlett Packard Enterprise

German SAP users are generally skeptical about the cloud and even more skeptical about SAP cloud solutions, according to a survey conducted by the German-speaking SAP user group DSAG last summer. According to the survey, less than half of DSAG members (46 percent) generally have a „somewhat positive“ or „very positive“ attitude toward the cloud, and only a third are „somewhat satisfied“ or „very satisfied“ with cloud solutions in the SAP space.

At first glance, this seems to be a deal-breaker for SAP’s RISE strategy - but only at first glance. Cloud does not equal cloud. If you want to move your SAP applications to the cloud, you don’t have to move them to a remote cloud data center - you can keep them running in your own data center.

The foundation are on-premises cloud models such as HPE GreenLake. They offer the same advantages as the public cloud - including simplicity, flexibility and consumption-based billing - but in customers’ data centers or at another location of their choosing, for example at a large production site. The systems are operated by HPE, up to application baseline operation if desired.

On-premises cloud - what and how?

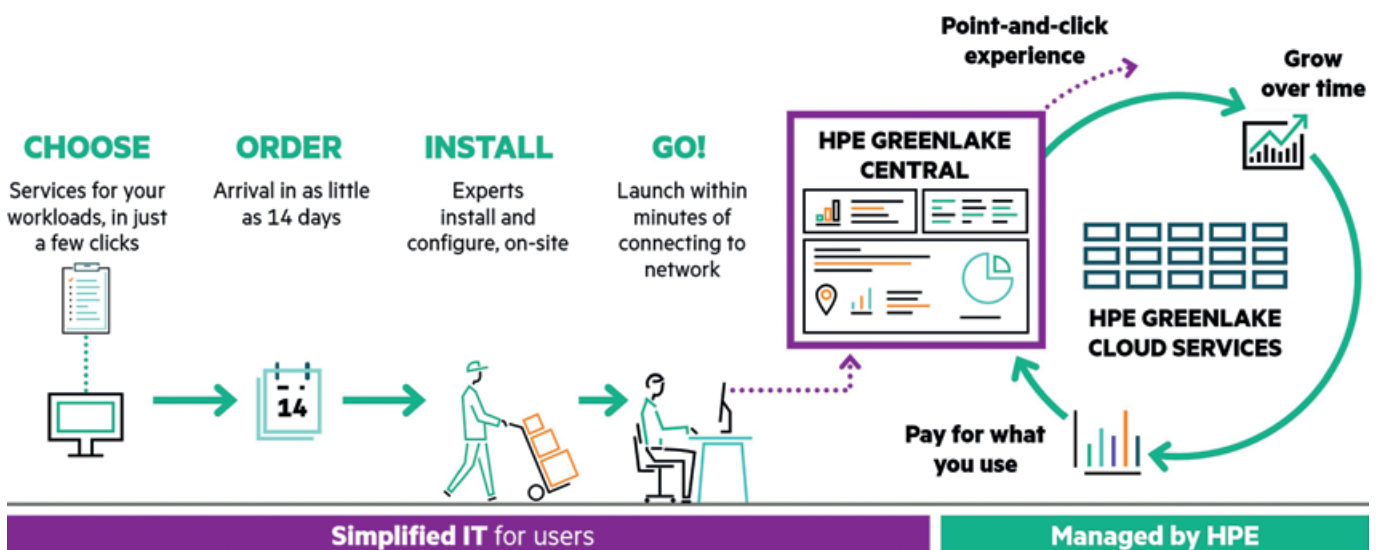
There are providers who, when talking about on-premises cloud, mean only consumption-based billing for IT infrastructure. In reality, on-premises cloud is much more - for example, fast and simple scaling of system capacities as needed, operational responsibility by the provider with a master SLA agreement for every location worldwide, and a management portal through which customers can very easily place orders, control costs, or overlook the status of their entire system landscape.

How is it possible to deliver these benefits in customers’ data centers? It involves thousands of building blocks in areas such as automation, analytics, and artificial intelligence (AI), processes, globally distributed service locations - and, not least, a lot of experience. In HPE’s case, it’s backed by more than a decade of learning and a slew of targeted acquisitions. Today, well over a thousand customers worldwide use HPE GreenLake, including large and small companies from all industries and public administrations. The GreenLake portfolio includes a large number of IaaS, PaaS and SaaS ser-

vices and an extensive partner ecosystem. Services include bare-metal, hyperconverged systems, container platforms, machine learning operations, VDI, SAP, a range of industry solutions and much more.

So, how does an on-premises cloud work? Here is just one example of many to illustrate the point: rapid scaling of system capacity to meet demand, which HPE ensures by two means - a physical capacity buffer in customers’ data centers and metering and capacity analyses through analytics and AI. Among other things, these analyses determine the extent of the physical capacity buffer required, which can be activated and deactivated again within minutes.

Using long-term capacity forecasts, HPE determines if and when the physical IT infrastructure needs to be expanded so that delivery processes are triggered before a bottleneck occurs. Metering - based, among other things, on the technology of Cloud Cruiser, a company acquired by HPE - is also the basis for consumption-based billing and for the originator-based internal allocation of IT costs. Customers do the latter via the GreenLake portal, which they can also use for monitoring, compliance management, multi-cloud management and more.



HPE GreenLake is much more than just consumption-based billing in customers’ own data centers - it is a cloud model from order to operation.

GreenLake with SAP or with HPE?

Anyone who wants to transfer their SAP environment to an on-premises cloud model with GreenLake basically has two options: They can do it with SAP, or they can do it with HPE. However, the respective offerings differ considerably. It largely depends on the IT strategy, company history and other preferences which offering is right for which customer. The difference in a nutshell: GreenLake as part of the SAP offering is a fixed predefined infrastructure service - GreenLake directly from HPE offers significantly more flexibility and freedom of choice.

Specifically, SAP uses GreenLake for its S/4 Hana Cloud, Private Edition, Customer Data Center offering. As the name suggests, this offering can only be used for S/4. The customer has no choice in terms of databases, hypervisors, or management tools, nor can applications from other providers be run on this platform. HPE GreenLake is ordered from SAP and is part of the overall RISE contract. HPE is responsible for operating the IT infrastructure (IaaS) with GreenLake up to the hypervisor level. SAP operates the application services on top and acts as the overall contractor for the complete stack.

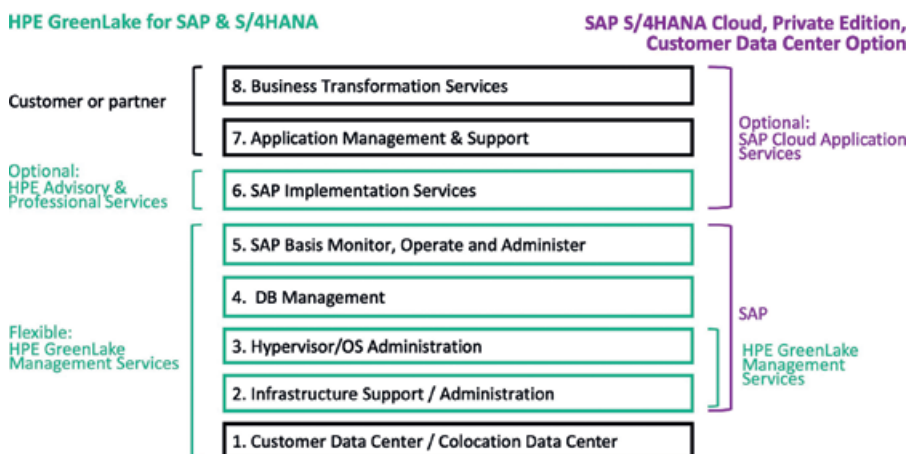
With the Customer Data Center option, the customer cannot exert any influence on either the SAP base operation or the IT infrastructure, very similar to using a public cloud model as part of RISE - but in customers' own data center, and therefore with advantages in terms of data sovereignty and latency, for example.

For customers who have already migrated to S/4 Hana or want to migrate and are also willing to adapt to SAP specifications, the Customer Data Center option is therefore an attractive alternative to the public cloud. On the other hand, for those who do not want to do without architecture adaptations and thus an individual SAP system, and who also want to use the same on-premises cloud platform for other applications, GreenLake with HPE is the better solution.

Flexibility in the on-premises cloud

HPE GreenLake offers customers freedom in many respects. For example, it is not necessary to migrate to S/4. Customers

HPE GreenLake for SAP & S/4HANA



GreenLake by Hewlett Packard Enterprise (HPE) and from SAP - a comparison for S/4 conversion.

can move their existing systems to GreenLake and if they want to migrate, they can do so within that model. Of course, this also means that customers can move their existing SAP modifications, databases, management tools, etc. to the GreenLake platform. Another advantage is that customers can also run other applications in the same GreenLake environment - this makes sense, for example, if these applications are closely intertwined with the SAP system.

GreenLake also offers flexibility in terms of operational responsibility. If desired, HPE can assume full operational responsibility including SLA agreements up to application baseline operation. However, if customers want to do more on their own, they can also use HPE services only up to an arbitrarily defined level and coordinate them individually with HPE. In addition to operating services, HPE also offers a comprehensive portfolio of consulting, migration and integration services in the SAP environment. HPE, by far the market leader in SAP platforms, has decades of experience in this area.

One question remains to be answered: Often the existing SAP infrastructure is owned by customers - so how does the transition to an on-premises cloud work, where the systems are owned by the vendor and provided to the customer as a service? One answer in the case of HPE GreenLake is that HPE's house bank, HPE Financial Services, buys the systems from the customer. So, the customer gets an injection of capital that they can use as part of the GreenLake contract or for other digitization projects. When the systems re-

ach the end of their lifecycle, they are renewed under the GreenLake contract. HPE has set up a circular economy system for legacy systems that are no longer needed: They are refurbished after complete data erasure and resold as used equipment.

Cloud paradigm change

Public cloud has been an important driver of digital transformation in recent years. With increasing use, customers have also become increasingly aware of its downsides - for example regarding data sovereignty, latency, and integration with in-house applications. Nor has the assumption that the public cloud is generally more cost-effective than in-house operations proved to be true, because flexibility has its price.

With on-premises cloud, the rules of the game are now changing. Customers are getting cloud functionality, but on their terms and under their control. The public cloud remains an important part of any IT strategy, but now customers have a full-featured alternative. This also applies to the SAP application - an application that controls the core business-critical processes in many companies and comprises the most important data. The future will show how SAP users decide.



Mike Wenner,
Distinguished Technologist, SAP Competence Center, Hewlett Packard Enterprise

Interview with Ulrich Seibold, Vice President HPE GreenLake Cloud Services DACH

The Best Of All Worlds

If the whole IT world wants cloud, there's only so much you can say against it. However, Hewlett Packard Enterprise (HPE) has analyzed the market and subsequently developed a cloud computing architecture that, among other things, offers cloud functionalities in on-premises data centers as well.

E-3: HPE advertises GreenLake as “the better cloud”. In just a few words, what makes the cloud better?

Ulrich Seibold, HPE: Simplicity, speed, and flexibility - while still retaining full control and freedom of choice. With GreenLake, customers aren't bound to a specific cloud stack. They can decide for themselves where their cloud solutions run - whether that be in their own data centers, at any other location, or in a colocation data center.

E-3: The name GreenLake is reminiscent of data lake. Was this a conscious decision? What does HPE allude to here?

Seibold: GreenLake indeed has a strong connection to the topic of data value. The vast majority of data originate at decentralized locations, for example in factories, smart cars, or hospitals. It is not efficient, and it can be a problem in terms of data sovereignty to transfer all these data to a central platform. With GreenLake, we're going the opposite way: We're bringing the cloud to the data, not the data to the cloud.

E-3: SAP has tried something similar once before with its Data Hub and failed. What does HPE do better?

Seibold: We create consistent data access without centralizing the data. Put simply: With our technology, customers can create data spaces spanning numerous data centers, sensors, machines, and plants. Data remain where they have originally been created, but users still have access to all of them. Consequently, data can be correlated, analyzed, and used to train artificial intelligence models.

E-3: According to research company Gartner, data lakes are insufficient.

Analysts are currently discussing the term data fabric. When will HPE start offering “Green Fabric”?

Seibold: We've been offering the technology for three years already. Since last year, data fabric has become an integral part of HPE GreenLake. We also use the term Data Lakehouse which refers to the newest generation of analytics platforms, combining the efficiency of a data warehouse with the extensive data pool of a data lake.



Ulrich Seibold, Vice President HPE GreenLake Cloud Services DACH, has an answer for cloud functionality on almost any existing infrastructure.

E-3: It has become quite obvious that most CIOs are in favor of cloud computing; they mostly seem to be disagreeing about the best deployment model: (hyperscaler) cloud only, a hybrid model, or cloud functionality in customers' own data centers. Where does GreenLake fit into all of this?

Seibold: HPE GreenLake firstly stands for cloud in customers' own data centers or another location of their choosing. If required, HPE assumes full operational responsibility with SLA up to application baseline operation. Secondly, GreenLake is a multi-cloud platform, allowing customers to easily integrate their own platform with external public cloud solutions.

E-3: What are the benefits of GreenLake for SAP customers?

Seibold: GreenLake allows SAP customers to move their SAP landscapes to a cloud deployment model and still retain full control. For example, SAP customers can choose where they want to run their SAP applications or to which extent HPE assumes operational responsibility. They are also free to choose if and when they want to migrate to S/4 Hana.

E-3: Is GreenLake at odds with RISE with SAP?

Seibold: No - quite the opposite, actually! SAP itself uses HPE GreenLake as foundation of its Customer Data Center option in S/4 Hana cloud.

E-3: A survey of the German-speaking SAP user group DSAG highlights that many of its members would prefer an on-prem model for Hana and S/4. Can GreenLake be that compromise between what DSAG members want and what SAP offers with its “Cloud Only” approach?

Seibold: I wouldn't call it a compromise, but rather a full-featured cloud alternative for customers who prefer the on-premises model.

E-3: What are GreenLake's benefits for CIOs that use non-SAP solutions as well?

Seibold: Centralized, proprietary models are a thing of the past. GreenLake, on the other hand, is a platform for the new era of digitization. It combines seemingly incompatible principles: decentrality, openness, and variety on the one hand; seamless cloud experience and consistent management on the other. In this context, SAP is just one of many applications our platform supports. We have an extensive GreenLake partner ecosystem ranging from infrastructure to applications.

E-3: How would you convince a CFO of your platform?

Seibold: We usually do not have to convince CFOs. For them, it is about Opex instead of Capex and lower overall costs. With GreenLake, customers only pay for what they use. We can precisely measure usage and we can charge the costs to the customers' cost centers if desired. That alone reduces costs dramatically because costs are allocated based on causation. We also offer very interesting financing options with HPE Financial Services, for example sale-and-lease-back of existing IT infrastructure which frees up money for the customer's digital transformation.

E-3: Thank you for the interview.