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ONE PLUS ONE EQUALS ONE: PORSCHE INFORMATIK FORGES DATA CENTER FROM A SINGLE MOLD

PORSCHE INFORMATIK

Industry
Automotive industry

Goal
A data center that can be expanded at will to fit any workload; and that secures high computing power, clear and manageable structures, a high degree of automation, the greatest possible security and a flexible billing model.

Approach
Complete change of IT approach towards a Software-Defined Data Center, based on two future-oriented approaches: HPE Synergy and HPE GreenLake.

IT benefits
- Simple and centrally controlled system management
- Highest computing power
- Expandable computing, storage, and fabric resources
- Security of an on-premises infrastructure with the technological and economic flexibility of private cloud services
- Complete control over the entire computing environment and all workloads, via one platform (HPE OneView)

Business benefits
- Increases speed and agility in project implementation
- Enables maximum billing flexibility due to the "pay per use" principle
- Avoids high initial costs
- Enables the implementation of digitalization needs in the automotive industry
- Offers great potential for further development of additional services
- Enables simple, cross-border cooperation

IT service provider for Porsche Holding combines two future-oriented IT approaches into one overall solution on the road to becoming a software-defined data center—with HPE Synergy and HPE GreenLake.

Full throttle for IT: Porsche Informatik has completely renovated its data center. Now everything comes from one single source—thanks to HPE. What at first sounded simple has turned out to be one of the most challenging and innovative data center approaches in Austria. Not only has the high-performance computing platform HPE Synergy, powered by Intel®, moved into the Salzburg IT environment of Porsche Holding's in-house IT service provider, but also HPE GreenLake, a new service model based on the "pay per use" principle, has been adopted. For Porsche Informatik this is not only an important move towards fulfilling the digitalization needs of the automotive industry, but above all a vital step on the way to a "software-defined" data center.

"In today's automotive industry, one thing counts above all else: being fast and agile," explains Gerald Nezerka, Team Leader, Virtualization & Storage at Porsche Informatik. The development time for new technologies and time-to-market are getting shorter, while digitalization advances continuously. The trend towards e-mobility has also added new spice to the IT mix—one that flavors everything in Porsche's own data center.

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That's why it was time for Porsche Informatik, a wholly owned subsidiary and IT service provider of Porsche Holding based in Salzburg, to modernize its IT components from the ground up. This radical approach was—in effect—to turn Porsche Informatik's entire data center upside down. The result: Since the first half of 2019, new HPE Synergy components have been providing computing power for Porsche. What's more, the combination with HPE GreenLake has raised the flexibility of the data center to new levels in terms of billing. Now Porsche Informatik only pays for the computing power that is actually used, by approximately 30,000 Porsche employees in 29 countries around the world.

HPE SYNERGY—OPTIMAL HARDWARE AS THE BASIS FOR SOFTWARE

"Anyone like us, with a diverse and multi-layered hybrid infrastructure, wants clear, manageable systems, a high degree of automation and the greatest possible security, in addition to high computing power. HPE Synergy has given us all of this," says Johannes Strasser, Virtualization Architect and "owner" of the new structure at Porsche Informatik's data center.

Porsche Informatik has chosen a clear path—towards software, and therefore towards agility. With HPE Synergy, the IT service provider has introduced a software-defined infrastructure that, in hybrid cloud environments, quickly and easily assembles flexible pools with physical and virtual computing, storage, and fabric into any configuration and for any workload. This is tailored to work seamlessly with the hybrid cloud services platform VMware Cloud Foundation™ and customized for the specific requirements of Porsche Informatik—features which are highly appreciated by Nezerka and Strasser.

After six months of comparing market offerings, planning and a short test phase, the green light was given for the new components. Since January, a total of eight HPE Synergy 12000 frames equipped with 38 HPE Synergy 480 Gen10 computer modules have been operational at Porsche Informatik. Based on next generation Intel® Xeon® Scalable processors, which forms a powerful computing basis for the hybrid cloud infrastructure. By the end of June, another eight frames with 36 HPE Synergy 480 Gen10 and 16 dedicated NVIDIA® graphic processors for the virtual desktop infrastructure were added in a second wave of the modernization project. Also new in-house, is an additional frame with eight HPE Synergy 480 computing modules and 26 TB storage that serves as an explicit "test lab" with which the production environment can be simulated 1:1.

A total of 32 HPE Synergy DS3940s with a combined capacity of more than 2.2 petabytes function as storage modules in this flexible, highly scalable infrastructure. This is equipped with all flash technology, completely interlocked with VMware vSAN™, redundantly designed and thus fail-safe in the stretched cluster connected via two data centers and—naturally—provided with automated failover. With the new 40GbE, the network has also received a noticeable performance boost. "The performance differences to the predecessor environment are significantly improved. Everything is running noticeably faster and more smoothly—and the employees feel this too," Strasser confirms about the new system.

HPE OneView is the brain of the overall structure in the Porsche Informatik data center. The management software not only keeps track of the new composable platform, but also gives Nezerka and his team full control over the entire computing environment, and individual workflows. "Now, no matter how big, short-term or ambitious the digitalization needs of Porsche Holding or the dealers of the entire VW Group are, thanks to HPE Synergy, we can plan and implement for this relatively easily and quickly," Nezerka says.

HPE GREENLAKE MAKES DATA CENTER SOLUTION COMPLETE

HPE GreenLake is the cherry on top of the IT sundae, with the main differentiator underlying this flexible service model being a consumption-based approach. Put simply, Porsche Informatik only pays, on a monthly basis, for the computing power that is actually used. "HPE GreenLake optimally rounds off the Synergy solution. This also gives us the financial freedom to act with agility," explains Nezerka.

What seems at first like a simple software-as-a-service model is actually so much more. This is especially in view of the sheer size and organizational complexity of Porsche Holding, Europe's largest car dealer with countless brands, and worldwide dealers from the VW Group, for which Porsche Holding is responsible. Ultimately it was the decisive financial advantage that convinced the IT team, and thanks to HPE GreenLake, high initial procurement costs were avoided.

"The combination of HPE Synergy and HPE GreenLake gives Porsche Informatik the best of both worlds," explains Markus Dallinger, Enterprise Account Manager at HPE Austria. "The overall solution combines the highest computing power, simple and centrally controlled system management, high level of automatization and security of an on-premise infrastructure with the technological and economic flexibility of private cloud services. The result is an unparalleled return on investment. We definitely forged a future-oriented solution from a single mold for Porsche Informatik."

ON THE WAY TO THE SOFTWARE-DEFINED DATA CENTER

Totally software-defined—this is the goal Porsche Informatik has set, so that in future every employee can, "Simply click their own IT worlds together as they are needed," as Nezerka casually puts it. But there's more to it than that, because the more automated the IT is, making the daily life of IT administrators easier, the more Nezerka, Strasser and colleagues can concentrate on what is really important: strategically thinking ahead and further developing the platform.

Step by step, the migration of the entire Porsche IT system into the new data center components is currently being driven forward, with the project scheduled to run for five years, with staged expansion. However, as Nezerka admits with a smile, "The target timeline shifts dynamically."

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Customer at a glance

Solution
- HPE Synergy
- HPE GreenLake

Today, the majority of Porsche Holding's IT already runs on the new platform—starting with the classic working environment of Office 365 applications, through databases on dedicated servers, to virtual desktops that enable simple, cross-border collaboration. The heart of Porsche Holding—the central, and extremely business-critical dealer management system—is to follow in 2020.

New projects and concepts also need to be implemented, and the head of the Porsche IT department is full of ideas—with good reason, as Nezerka concludes, "With HPE Synergy and HPE GreenLake, we have laid the foundation for a software-defined data center. Now it's up to us to exploit the full potential. Whatever the future holds—we are ready."

About Porsche Holding GmbH
Porsche Holding GmbH, headquartered in Salzburg, has been a wholly-owned subsidiary of Volkswagen AG since 1 March 2011 and operates in the wholesale, retail, financial services and IT system

development industries. The Salzburg-based trading company was founded in 1949 and is active in 29 countries (status: by the end of 2018) in Austria, Western and Southeastern Europe, Colombia, Chile, China, Malaysia, Singapore, and Brunei. For more information: porscheholding.com.

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