

hp success story



mission accomplished
with hp

New service products for dealers and workshops, the new Porsche Cayenne and a new production facility have meant that the requirements made on the ERP environment at Porsche AG have shot up over the last few months. Highly available servers, which can be adapted to changing workloads, are an important prerequisite for completing these tasks. In the HP Superdome servers, Porsche's IT subsidiary PIKS has found the optimal platform for building an infrastructure that can meet these requirements.

Porsche AG, with its headquarters in Stuttgart, employs 9,750 people worldwide. The company emerged from an independent engineering firm, founded by Professor Ferdinand Porsche in 1931. For the financial year 2000/01 the Porsche group had a turnover of 4.44 billion Euros (approximately US\$4.6). In addition to its 911 and Boxster ranges, in autumn of 2002 Porsche introduced a third model range to the market, the four-wheel-drive Cayenne.

business development

In addition, Porsche develops and manufactures a range of custom and racing models and, through its subsidiary Porsche Engineering Services (PES), it also provides international business development for third-party customers in the automobile sector. The company has production facilities in Zuffenhausen (Stuttgart) and Leipzig, Germany and has dealerships and sales offices world-wide. Porsche Information Kommunikation Services (PIKS) GmbH is a 100 per cent subsidiary of Porsche AG, with headquarters in Stuttgart. PIKS is responsible for planning and operating the IT infrastructure for the entire Porsche group, including networks, servers, data security systems and storage systems. It has 86 employees.

reputation

One could easily think that it has all been said before about Porsche: the sports cars from Stuttgart are known and coveted the world over - but there are plenty of new developments afoot at Porsche. Behind the development and production of first class vehicles there is also a first class IT infrastructure. Today there is a complete R/3 environment for all ERP tasks, running on three HP Superdome servers.

For central business processes, Porsche was quick to realise that complex logistics processes can only be run by a comprehensive ERP solution. As a result, Porsche was one of the first automakers to introduce standard enterprise software in the form of SAP R/2 – replaced during the 1990s with an R/3 implementation on HP V-class servers. The main focus of the application was on the R/3 modules for accounting and finance, purchasing, sales and materials

management. A remarkable 1.5 million transactions were reliably and quickly processed by HP's then state-of-the-art V-Class servers.

looking to the future

Despite the high quality and the high degree of innovation already present in its vehicles, Porsche is continuously raising the bar to successfully defend its market position. Porsche also continues to develop new market segments, with a prime example of this being the introduction of the new four-wheel-drive Porsche Cayenne. With the Cayenne, Porsche has added a new vehicle group to its product portfolio - namely a Sports Utility Vehicle (SUV for short). It is not a sports car in the classical sense, but it is a true Porsche. As soon as it was announced, the Cayenne generated a great deal of interest among dealers and customers. The Cayenne is produced in a new factory in Leipzig, Germany.

logistics in a new production facility

The new production facility is particularly important for the Cayenne. The geographical expansion of the company has increased demands made on production logistics. With the new model alone, transactions in the ERP environment will rise by 150 per cent.

Since the middle of 2001, demands on Porsche's IT infrastructure have also grown because of the introduction of new SAP R/3 modules, such as the replacement part logistics module in addition to the challenges of a new model introduction and a new production plant. This brings with it new requirements for a replacement parts logistics system all over the world, which is currently being moved to SAP. This is a daunting task for the IT department.

challenge

- Demands on Porsche's IT infrastructure have grown because of the introduction of new R/3 modules, a new model introduction and a new production plant
- Geographical expansion of the company has increased demands made on production logistics
- Porsche's IT infrastructure needs to be able to support the development of new market segments

solution

- 64-way hp superdome
- SAP system
- hp consulting

results

- With the new model, transactions in the ERP environment will rise by 150 per cent
- The parts market for the USA and Canada is supported by an SAP system on two hp Superdome partitions
- Clustering increases system reliability, flexibility and investment protection
- Mainframe-class performance and stability

why hp?

- The strategic support of the Intel Itanium processor family by SAP AG, underscores the logic of Porsche's decision in favour of the hp Superdome solution
- hp prevailed over the competition because they were able to offer a smooth migration, without any hidden additional IT costs.

"Not only is our range of products being expanded. We are also implementing R/3 on a global scale for the world-wide control of Porsche logistics, including support for our dealers and service partners," explains Robert Riemann, head of SAP R/3 systems engineering at PIKS GmbH.

advancing development

The comprehensive use of R/3 advances the development of the Porsche IT infrastructure. As a result, the replacement of part systems and dealer care are currently being changed over to Porsche's world-wide sales network. In this way, parts and vehicles can be made available quickly and precisely, and can be tailored to specific requirements. The SAP APO (Advanced Planning Optimiser) solution can accurately reproduce these processes, but to do so it needs a very high capacity server such as the 64-way Superdome.

"Replacing the old parts service with SAP goes a long way to safeguarding the future of Porsche. Next to vehicle sales, after sales is one of the most important sources of revenue," explains Robert Riemann.

"Mainframe-class performance and stability - those are our requirements for the ERP infrastructure. The hp Superdome server and hp's Critical System Support will meet these requirements very well."

Robert Riemann, head of SAP R/3 systems engineering at Porsche Information Kommunikation Services (PIKS) GmbH

hp superdome - in a class of its own

The Superdome is HP's most powerful, scalable server, with up to 64 PA-RISC 8700 processors. The system is based on cc-NUMA architecture, which features a multi-stage crossbar concept. The HP Superdome uses modular cell boards with four processors each, making it possible to have an aggregate crossbar performance of 64GB/s. An HP Superdome currently supports a main memory of up to 256GB and up to 192 PCH/O slots. Depending on the application, the Superdome operates as a single system image or as an SMP server with 64 processors. Alternatively, individual cells can be completely partitioned from the rest of the system and run as hardware partitions.

In the future, the HP Superdome will be in-chassis upgradeable to the Intel Itanium processor family. Partitions will then be able to run with 64-bit Windows or Linux, in addition to the industry-leading HP-UX 11i.

hp superdome - high-end performance with mainframe capabilities

PIKS GmbH tried various different models for dealing with these requirements. All of this started 12 months before the expiration of the contracts for the existing IT infrastructure. Each solution tested was designed not to increase either the personnel expenses or the structural infrastructure while at the same time achieving a level of availability and manageability previously known only with mainframes. Mainframes were seriously considered as an alternative to the new HP Superdome systems. The existing reliability and performance of the HP V-Class servers meant that the yardstick for any future IT system was set very high.

Finally, it was necessary to adhere to a tight timetable. Planning, placement in, installation, migration, and finally 'go live'. Robert Riemann commented, "Thanks to our previous collaboration with HP, we were able to go live several months ahead of schedule."

adapting to R/3

The HP Superdome server was selected because its partitioning capabilities meant that it could be optimally adapted to suit the different R/3 modules. Partitioning also increased the availability of the server landscape as the replacement system is already practically integrated. In urgent situations, it is possible to simply move a workload over to a standby cell board. HP also prevailed over the competition because it was able to offer the customer a smooth migration, without any hidden additional IT costs.

service and support to suit our requirements

PIKS GmbH was won over by both the strong support in the form of the Critical Systems Support (CSS) and the comprehensive services provided by HP Consulting, as well as by the excellent price and performance. As a result, there was no question when it came to changing or further development of existing support and guarantee agreements. Migration from the V-Class servers to the HP Superdome systems at Porsche was thus made particularly flexible.

"It all came down to HP's IT infrastructure capabilities and the related support for critical systems", explains Robert Riemann

With the introduction of new R/3 modules, such as parts service and APO, availability requirements increased, because R/3 was being used to a much greater extent around the world and around the clock."

Two HP Superdome servers, each with 24 PA-8700 processors and 28GB RAM serve the entire R/3 environment. At present 18 CPUs are active. The additional six CPUs are instantaneously available for iCOD (instant capacity on demand), both as back up and to cover capacity requirements. There are currently approximately 4,000 R/3 named users throughout Germany working with all dealers on the two HP Superdome servers, which are configured in a cluster. Not only does the cluster concept increase system reliability, but it also increases flexibility and investment protection.

In addition, the parts market for the USA and Canada is served by an SAP system on two HP Superdome partitions. SAP APO also runs on its own partition. In just one week, five partitions on three HP Superdomes were smoothly transported to live operation.

doubling capacity

Compared with today's HP Superdome servers with PA-8700 processors, in the near future almost double the transaction processing capacity will be available thanks to next generation PA-RISC processors and processors from the Intel Itanium processor family. The strategic support of the Intel Itanium processor family by SAP AG, underscores the logic of Porsche's decision in favour of the HP Superdome solution

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customer at a glance:

industry sector: Automotive

name: Porsche

headquarters: Stuttgart, Germany

founded: 1948

number of employees: 9,750

URL: www3.Porsche.com

technology highlights:

- **64-way Superdome**
- **Clustering**
- **SAP R/3**

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