

BayWa Group enjoys increased performance and stable costs with new IT infrastructure

“Our system management has been significantly simplified through the consistent implementation enabled by blade technology and the converged infrastructure approach.

It has put us in a position to operate our business critical SAP systems more efficiently and without compromising the availability in any way. We are able to maintain our operating costs at a constant level over the long-term despite significant increases in the demands made upon the infrastructure.”

Eugen Berchtold, director, RI-Solution



Objective

Consolidate and standardise the hardware infrastructure in order to simplify business and service processes, while quadrupling the infrastructure performance

Approach

Obtained offers from various IT service providers based on the expected performance increases

IT improvements

- Enhance the performance of the SAP infrastructure from 160,000 to 420,000 SAPS
- Improve the response time of SAP applications by 20 per cent across the board
- Increase identification of errors to enable faster recovery following faults

Business benefits

- Stabilised operating costs despite a four-fold performance increase
- Reduced SAP operating costs from €10 to €4 per unit
- Ensured corporate growth
- Reduced power and cooling costs by 20 per cent, saving €25,000 per annum

HP customer case study:

RI-Solution GmbH completely modernises its customer BayWa's IT environment with HP Converged Infrastructure

Industry:

Retail (agriculture, construction, energy)



Headquartered in Munich, BayWa Group specialises in wholesale, research and service provision for the agriculture, building materials and energy sectors. The company's IT infrastructure is supported by in-house service provider, RI-Solution.

The IT systems are closely aligned, meaning if the servers at the data centre suffered an outage, employees at the 900 retail locations would be unable to take orders, process orders or record goods-in. “The high level of system integration enables us to automate many operational processes,” explains Eugen Berchtold, managing director at RI-Solution. “But at the same time, the integration assumes the systems are permanently available. Otherwise BayWa's entire flow of goods would grind to a halt.” The company requires high availability, reliability and performance from its IT infrastructure.



Infrastructure modernisation to support long-term growth

In tandem with ongoing improvements in the efficiency of the broader business, and timed to coincide with the SAP systems release change from version ECC 5.0 to ECC 6.0, RI-Solution kicked off a far-reaching modernisation project. The project team wanted to modernise the hardware infrastructure at the same time as carrying out the upgrade. This put the onus of designing an architectural solution for the hardware configuration on those tendering for the project.

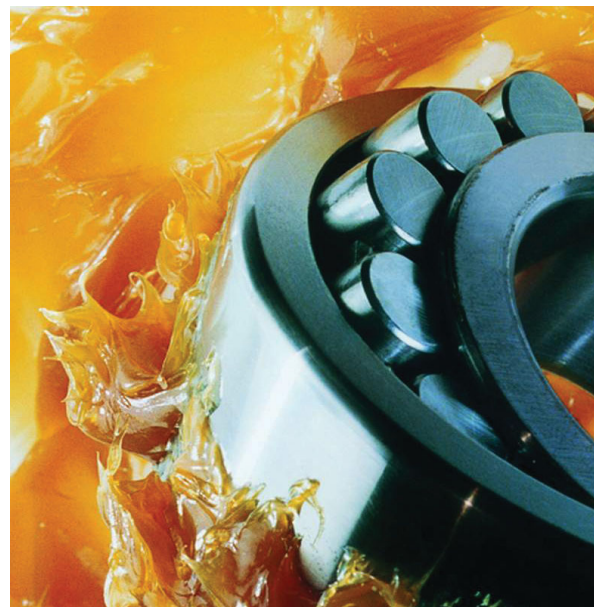
RI-Solution aimed to increase the SAP infrastructure performance by a factor of four, while IT costs remained the same, in particular, the expenditure for managing the systems should not increase. Therefore one essential objective was to standardise hardware configuration in order to simplify the operational and service processes. With this in mind, RI-Solution decided to procure all server systems from a single provider.

The converged infrastructure concept drove the decision in favour of HP

Having evaluated the tender proposals RI-Solution opted for HP. A significant factor in this decision was the overall concept of a converged infrastructure, which formed the basis of HP's bid. The project planners hoped this would make a significant contribution to the standardisation of their infrastructure. For example, the SAP systems at BayWa and RWA run on Unix servers, while the non-SAP systems run on x86 computers. Operating different systems made it necessary to employ multiple management tools, in turn requiring various qualifications among IT personnel.

With a converged infrastructure, HP has created the technical basis for integrating both mission critical systems and industry standard servers into a single infrastructure managed using the same tools. HP's concept is based on a standardised blade technology from the ProLiant & Integrity server families, HP Superdome servers, the use of as many common components as possible and a complete management strategy. This way, all hardware resources can be monitored and controlled by a single tool, HP Systems Insight Manager (SIM).

"HP's innovative concept was convincing. It did not simply maintain the status quo, but replaced the existing systems with something completely new," reasons Günther Bauer, joint managing director of RI-Solution. HP not only met the stated requirement for



the standardisation of the overall infrastructure with its bid, it also presented a coherent concept for the system platform on which the SAP applications would run. At the same time, HP committed to attaining all performance values defined by RI-Solution for the upcoming five year period.

Prior to the start of the project, the SAPS value of the systems maintained by RI-Solution was 160,000. Following the modernisation, it would be possible to increase the performance to at least 275,000 SAPS. At the same time, the application response times for users would decrease by 20 per cent in spite of the SAP release change and Unicode migration.

More flexibility through scale-out architecture

The HP concept for the SAP infrastructure meant a departure from the status quo, because HP proposed a scale-out architecture for those systems, which RI-Solution had been running on a virtualised Unix hosted architecture with several logical partitions up to that point. The majority of SAP systems were to be migrated to Unix Integrity blades series. Ultimately, HP beat a competing concept with this system, which RI-Solution had also evaluated. This concept was aimed at scaling up and would have continued the logic of a central host with expensive Unix machines.

The scale-out option offered RI-Solution major advantages. "Both concepts would have worked from a technical perspective", admits Hanns-Gunter Weber, Head of IT Infrastructure at RI-Solution. "However, in terms of the service costs, the HP bid differentiated itself significantly from the alternative." With a scale-up approach, the company would have had to invest significantly more in high-value services, as an outage within the central host system would have had a far greater impact than an outage within the decentralised scale-out architecture. The user would have been reliant upon an expensive service, which would have to react extremely quickly to outages and would have been significantly more costly.

By contrast, because the load is spread over several smaller systems in the scale-out approach, the risk is more widely distributed. Even in the case of widespread hardware failure, RI-Solution would be able to insert several blade servers into a functioning enclosure to restart business critical production systems. As it is not entirely dependent on an immediate resolution of the hardware fault, this lowers the service costs.

The scale-out concept also offers benefits in terms of unplanned growth. In the past, RI-Solution came up against the limits of the very large, indivisible systems. This made large investments in major new systems necessary. With the scale-out approach, it is possible to expand the infrastructure on a piecemeal basis. In addition, RI-Solution can take a more flexible approach to servicing a high number of blades, which can be swapped out among several enclosures. When a host system needs to be shut down for maintenance, all applications are halted.

"We had the choice between two fundamentally different architectural concepts," Weber concludes. "A comparison of the overall costs demonstrated that HP's offer was economically superior. It convinced us to such an extent that we took the risk of changing our service provider for our SAP system configuration. We minimised this risk by awarding the whole SAP configuration migration to HP as the general contractor."

SAP and non-SAP systems migrated to blades

The SAP database and central server are now running on 32 Integrity blades. In parallel, non-SAP systems were migrated from 196 older HP servers, most of them rack servers, onto 131 blades from the newest HP ProLiant generation. Additional SAP application servers were integrated into the common blade configuration of

Customer solution at a glance:

Primary Hardware

- 2 x HP Superdome 2
- HP Integrity BL860c Blade
- HP Integrity BL870c Blade
- HP ProLiant BL495c Blade
- 6 x HP Storage 8000 Enterprise Virtual Array (EVA)
- 2 x HP ESL Tape Libraries
- 2 x HP VTL9000 Virtual Tape Library

Primary Software

- HP Systems Insight Manager
- HP Serviceguard Solutions for HP-UX
- HP Virtual Connect Enterprise Manager
- HP Data Protector Software
- DB2
- SGeSAP with DB2

HP Services

- HP Critical Services

ProLiant/Linux. The BayWa SAP retail ERP system, one of the largest SAP-DB2 retail systems worldwide in terms of the load demands, was installed on two high-availability, high-end machines from the HP Superdome 2 series, as was the Business Warehouse system. Due to the extremely large workloads and the immense amount of data to be processed, the obvious choice in many cases was the manufacturer's flagship Unix system.

The project team carried out the migration during the holiday period because only 40 per cent of the usual load is placed on the BayWa system at that time.

Standardised management for Unix and the x86 world

After working through several glitches during the implementation stage, RI-Solution achieved all of the objectives of the project. Overall, it was possible to standardise the operational and service processes as planned. Among other things, it is now possible to monitor the entire hardware infrastructure, both the SAP and the non-SAP systems, via a single console.

In the meantime, the quality improvement far exceeds monitoring alone. "Due to greater levels of standardisation, the currency of the system, in terms of firmware, patches and the like, has increased significantly," says Weber, drawing attention to another key benefit. "As a result we are significantly closer to achieving our objective of ensuring the highest possible availability through proactive management, quicker fault diagnosis and faster recovery following a fault." In summary, the system management now achieves a higher quality at every level

In addition, the service strategy that RI-Solution has agreed with HP makes for as error free an operation as possible. The service provider ensures the infrastructure against unscheduled downtime through the HP Critical Service support agreement. The model is based on the notion that support is not just provided in reaction to faults, but rather that it removes potential fault sources, proactively minimising the risks. In order to do this, HP takes an holistic approach, which not only considers the technological aspects, but also includes the processes and users in the overall view.

“Proactive service strategies are the appropriate response to the demands of a highly-integrated IT operation,” emphasises RI-Solution’s managing director, Berchtold. “With the complex dependency on the IT systems it is essential for us that the service proactively takes action before the fault occurs.”

Up to thirty per cent improvement in SAP response times

The project achieved the hoped for standardisation of operational and service processes. The new infrastructure also meets the requirements in terms of performance. SAP application response times improved by 20 per cent across the board, in some cases, by 30 per cent. The IT system is well equipped to meet the predicted growth of the BayWa Group.

“We’re now in possession of a state-of-the-art system configuration. It simplifies the overall management through the consistent use of blade technology and the converged infrastructure approach,” says Berchtold.

“We’re in a position to be able to operate our business-critical SAP systems more efficiently without compromising the availability in any way. We are able to maintain our operating costs at a constant level over the long-term, despite significant increases in the demands made upon the infrastructure.”

The efficiency improvement can be seen with reference to a single key performance indicator. As a result of the system overhaul, the overall costs for the provision of an SAP performance unit across the entire SAP configuration has been reduced from €10 to €4. The improved energy efficiency of the blade system in comparison with the older rack servers contributes towards this. The power consumption for the operation of the IT equipment and the air conditioning sank by 20 per cent, which represents a saving of €25,000 per annum.

RI-Solution GmbH

RI-Solution GmbH, founded in 2002 as a subsidiary of BayWa AG and RWA AG, operates a total of 39 SAP systems for the two retail enterprises. By far the biggest is BayWa’s Central Retail Information System, which is based on the SAP retail branch solution where it is considered to be one of the largest systems in the world. Other SAP installations include the ERP core module, but also bespoke solutions for the management of dangerous substances for the control of fodder production as well as a business warehouse. Some applications are accessed by no more than a hundred users, whereas others, such as the BayWA system, are accessed by up to 9,000 members of staff. The in-house IT service provider operates around 290 non-SAP systems at its Munich-based computer centre, and provides IT services for 12,000 users.

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