

Lufthansa Systems: Take off with IBM and SAP.



Overview

■ **The Challenge**

Lufthansa Systems operates the mission-critical applications for the Lufthansa Group. High availability and disaster recovery are their highest priorities. Keeping pace with the continuous data-growth and maintaining flexibility demands a scalable and high-performing platform.

■ **The Solution**

The mySAP.com solution is an integrated, corporate-wide business application, running on IBM® server pSeries. The AIX servers run in a

cluster configuration on which HACMP is used to ensure high availability. IBM Enterprise Storage Server (ESS) is being used for data storage.

■ **The Benefits**

The performance and scalability of the pSeries server ensure an economic operation and investment protection. The mature AIX operating system offers simple administration. The mission-critical data is held highly available and secured against disaster. Data backup is simple and fast with no impact on the operation.

“An intensive partnership with IBM forms the basis for our projects. The cooperation has been excellent now for over 30 years and is one of the pillars of the partnership and cooperation with SAP. The best conditions for implementing innovative IT solutions.”

Horst Leber, Vicepresident Enterprise Data Centre, Lufthansa Systems GmbH

One of Europe's largest commercial computer centres is located at Kelsterbach near Frankfurt Airport. From here Lufthansa Systems Group GmbH operates the most exacting information technology over 6,800 sq m. It serves customers at over 60,000 terminals worldwide. Lufthansa Systems, which has been a management holding company with 17 associated companies since 2001, is part of the IT services business line and a 100% Lufthansa subsidiary. In 2001 Lufthansa Systems Group achieved a global turnover of 382 million Euro with its 4,200 employees. The largest customer is the Lufthansa Group but it has also made a name for itself outside the Group especially due to its data security, top quality availability, range of services and expertise.

Migration at Lufthansa AG

In 1995 the board of Deutsche Lufthansa AG decided to replace all the SAP R/2 systems in the group with SAP R/3. After their long search for a future-orientated, scalable platform with high administrative synergies they selected the IBM RS/6000 SP. Now Lufthansa Systems is running SAP R/3 with over 14,000 users in over 120 countries. Usually IBM is their platform of choice.

Recently Lufthansa AG has migrated more than 2,500 users to SAP R/3 Release 4.6c. In addition the Human Resources System, which is subject to special data security measures, serves over 600 users and has a payroll of over 75,000 per month. An IBM **@server** zSeries is the database server and the application server runs on an IBM RS/6000 SP.

Lufthansa Technik AG runs by far the largest SAP R/3 system in the Lufthansa Group. Virtually the whole operating business is processed using the mySAP.com solutions. The production system alone serves over 5,000 users and handles over 2,000 different transactions and 2,600 reports. It is mission-critical and runs 24/7 on an IBM **@server** pSeries 680

as the database server and seven RS/6000 SP application servers. Operations must be highly available and run at high performance levels – if the process chains were to come to a halt during aircraft maintenance it would result in considerable damage to the business. In May 2002 Lufthansa Systems completed the conversion from SAP R/3 Release 3.1i to 4.6c right on schedule. Both the sensitivity and complexity (over 100 interfaces) represented an enormous challenge to the whole project team and according to the customer was 'handled masterfully'.

Growth area SAP hosting

“SAP hosting is developing into one of our most important competence areas and growth engines”, explained Bertram Schön, Director of Enterprise Application Integration at Lufthansa Systems GmbH in Kelsterbach. “Our competitive advantage lies in the high security standards and the individual end-to-end customer support. This bears enormous potential for our customers”.

New top performance with pSeries 690

A well-known client from the heating products, casting and stainless steel industry is also in the best of hands. Lufthansa Systems has been running the EDP and networks for this Group, which has 2,000 users across Germany, since 1996. They recently decided to migrate from SAP R/2 to SAP R/3. The database servers run on zSeries, the application servers on various pSeries models. But Bertram Schön points out that this trusted hardware platform is only temporary. "The next step is to migrate the application servers to IBM @server pSeries 690." This solution with the option of depicting several servers logically is clearly superior to an IBM RS/6000 SP installation with a large number of nodes. "Administration is much easier, the growth paths more flexible." With its 32 CPUs, the AIX 5L™ operating system and the options for logical partitioning, the platform is also ideal for system consolidation.

pSeries guarantees constant expansion

Most mySAP.com solutions currently run consolidated over 5 IBM RS/6000 SP clusters. Over 200 servers integrated in the SP – so-called nodes – communicate with other computers in this family, including eight IBM RS/6000 S7A servers and other pSeries servers. They are supported by IBM disk technology and the newest Enterprise Storage Servers, which represent a substantial component for scalability, performance and data availability in the SAP systems with approx. 16 TB of data volume.

The productive systems are all protected against failure by HACMP in high availability clusters. These range from 'simple' HACMP cluster environments with reflected SSA disks right up to a high availability environment – with redundant, parallel data maintenance (shadow database concept) and parallel application servers in different computer centres. This concept guarantees the shortest possible transfer times – in minutes.

Integrative computer centre operation

The mySAP.com solutions of the

customers of Lufthansa Systems are an integrative component of their corporate processes; they generally interact with various applications within the environment. By operating the relevant EDP systems Lufthansa Systems is also contributing to problem-free business process in the heterogeneous environments. The Lufthansa Group's mySAP.com environment is embedded in a heterogeneous application environment with interfaces to other UNIX® systems and host applications. Lufthansa Systems runs systems in the OS/390® environment alone with a capacity of around 2,500 MIPS and disk capacity of around 10TB. On some days they process the same number of transactions as some mid-sized industrial companies in the whole year – and the trend is upwards. In addition to SAP R/3 Lufthansa Systems also supports such new solutions as mySAP BI, mySAP CRM and mySAP Mobile Business. "It is precisely the new mySAP solutions that are in heavy demand," says Bertram Schön. "We are currently setting up a SAP Business Information Warehouse with over 800 users for Lufthansa AG."





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IBM Deutschland GmbH
70548 Stuttgart
ibm.com/de

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