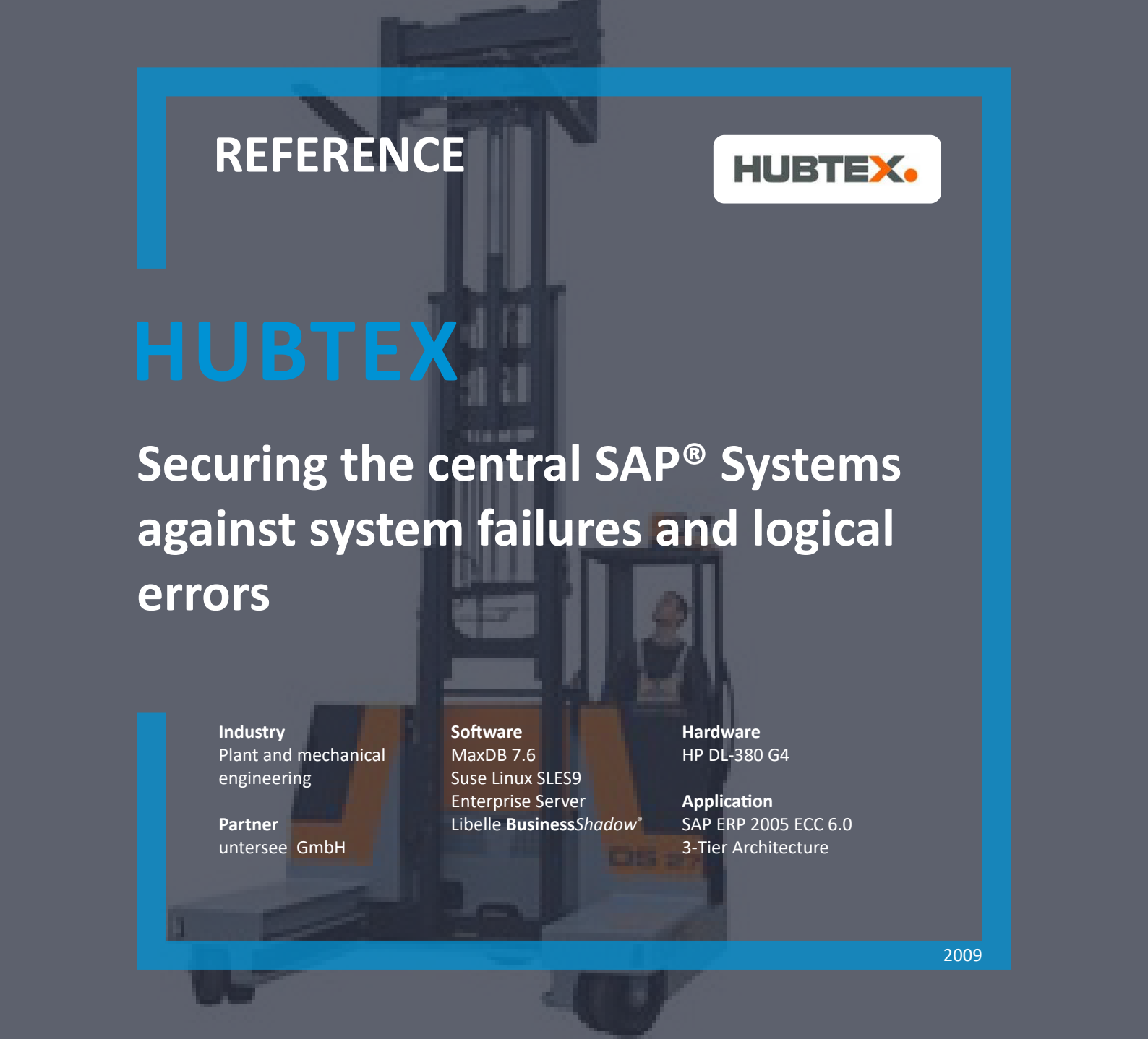


REFERENCE

HUBTEX

HUBTEX

Securing the central SAP® Systems against system failures and logical errors

Industry
Plant and mechanical engineering

Partner
untersee GmbH

Software
MaxDB 7.6
Suse Linux SLES9 Enterprise Server
Libelle **Business***Shadow*®

Hardware
HP DL-380 G4

Application
SAP ERP 2005 ECC 6.0
3-Tier Architecture

2009

CHALLENGE

A major downtime incident made it necessary to redefine the requirements for high availability.

SUCCESS

No investment in additional hardware necessary. Holistic protection for the SAP database and SAP files. Extremely fast reaction in the event of an error by simply switching the entire SAP environment over and back again

SOLUTION

Libelle **Business***Shadow*®

untersee
Lösungen mit SAP™

Thanks **Business***Shadow, our SAP system is now better protected from disasters*

Christian Schreiner
SAP-/EDV-Administration
HUBTEX

For years, HUBTEX Maschinenbau GmbH & Co. KG has held a leading position in the market for materials handling technology. The company's core business is the manufacture of custom-built industrial trucks, side loaders and special equipment for heavy, bulky goods. These are used for efficient material flow and goods handling in the tightest of aisles by manufacturing and trading companies.
This requires production that is precisely tailored to the customer's needs. Access to this production data must be permanent. This means that it must be possible to react immediately to IT problems. For this reason, the headquarters in Fulda has two data centers where systems for central services, primarily the operation of the SAP® system, are provided.

Challenge

High-available SAP systems

A major database failure in the production SAP system made it necessary to redefine the requirements for its availability. Since no cluster solution existed to protect against hardware failures, a software solution was needed that would reliably protect against the consequences of failures not only when a logical error occurred but also in the event of a hardware failure.
Furthermore, the solution should be easy to handle and not bring any additional complexity into the HUBTEX system landscape.

Solution Approach

Holistic data mirroring

The joint project team consisting of system managers from HUBTEX and SAP consultants from the company untersee analyzed the existing system landscape in a first step against the background of the mentioned requirements.
Libelle **Business***Shadow*® with its components Libelle **DB***Shadow*®, **FS***Shadow*® and **Switch***Application* turned out to be the optimal solution for this requirement. Not least because of the certificate „SAP certified integration".

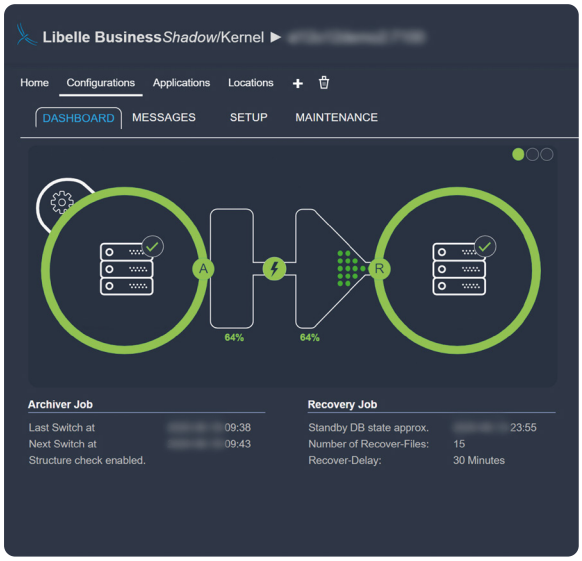
Success

Hardware investments could be avoided

For the backup, the existing HP server and storage infrastructure was used. The existing test system was given a secondary function: that of a mirror for the production system. In the event of a switchover, the test system thus takes a back seat to the mirror system. Due to the hardware independence of Libelle **Business***Shadow*, investments in additional hardware could be avoided.
The basis for the high availability strategy of HUBTEX is a two-cell concept. The SAP system was set up in two separate data centers, which are largely identical in terms of hardware infrastructure. Each of the data centers houses one of two storage units and one or two servers: the server with the SAP central instance „Production" and the production database under MaxDB 7.6, the development system with a MaxDB 7.6 database on the one hand, and the test system on which the additional instance of **Business***Shadow* is also located. All servers run under SuSE Linux Enterprise Server 9.

Holistic protection for the SAP database and SAP files

After the mirror has been set up and the initial copy has been made once, all changes to the production MaxDB database are mirrored asynchronously from the production server to the shared test and mirror system during normal operation using the Libelle **DB***Shadow* component. The resources required on the mirror system are so minimal that the mirroring does



not affect the main daily function of the test system. When the mirror system receives the change data of the production system, they are not immediately updated in the mirror database, this happens after a freely selectable time delay. In the case of HUBTEX, two hours during normal working hours. At night, no changes are transferred to the mirror system, but remain in the „funnel“ for the time being and are transferred to the mirror system on the next working day. This allows the reaction to logical errors such as data corruptions, faulty batch jobs, etc.
The same applies to the SAP-critical flat files: The current SAP data held in the file system, such as profiles, the usr/sap/trans directory, etc., are transferred to the mirror system as flat file mirroring with Libelle **FS***Shadow* and written with a time delay.
This ensures that all current data with the real SAP SID is available on the mirror system in the event of a switchover.

Simple switch-over and switch-back of the complete SAP® environment

In the event of a downtime or failure of the production system, or in the event of a failure of the complete data center, the mirror system will be activated. During the switchover, the Libelle **DB***Shadow* and **FS***Shadow* processes ensure that the mirror system is activated with a consistent data set. In addition, the Libelle **Switch***Application* component then also plays a central role: it activates the IP address of the production system on the mirror system. In this way, no further effort is required on the accessing application servers to redirect communication to the switched database server.
In addition to the migration of the SAP central and dialog instances to the database of the mirror system, the largely automated restoration of normal operation is also a key point.

Once the disruptions have been resolved, the production system is completely rebuilt at the click of a mouse on the basis of the active mirror system used during ongoing online operation and the defined switch back to normal operation.

Libelle Insights

Switchover tests and training

The cooperation with HUBTEX and the partner untersee was excellent. After the implementation, a switchover test with the SAP system was carried out as part of the acceptance and training.
With success: The SAP system was switched over with just a few mouse clicks and continued to run smoothly with real SAP SID within a few minutes after the switchover on the mirror system. Also, the switch back to normal operation including the rebuild of the database worked smoothly as expected.
HUBTEX thus considers itself well prepared for the case of emergency.

Would like to learn more?

Get in contact

Libelle AG
T +49 711 / 78335-0 I libelle.com