

Specialist in energy and transport



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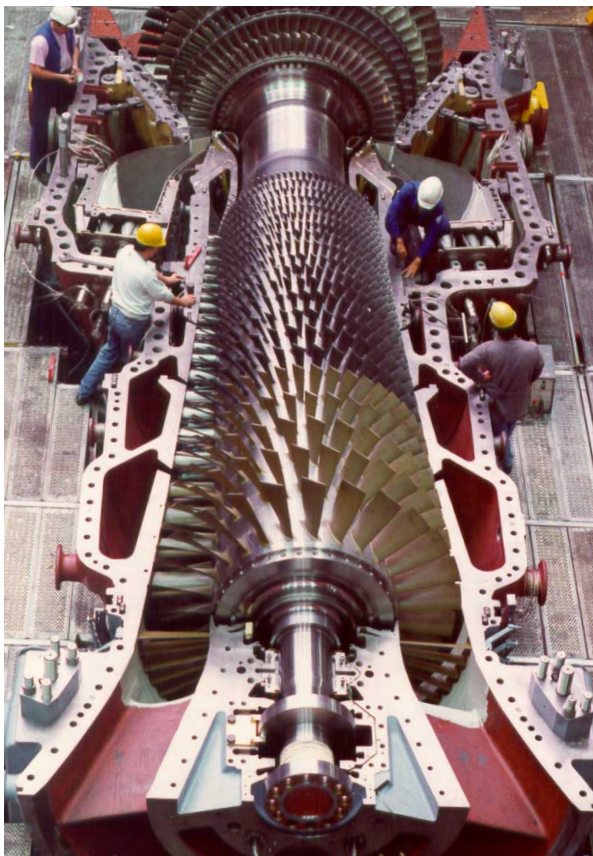
Gerrit Meyer, Manager, SAP Customer Competence Center, ITC Germany

Customer benefits

- > Lower costs for buildings, infrastructure and management thanks to server consolidation in a single data centre
- > Greater flexibility for further system expansion thanks to the use of a server farm with only a few standard types
- > Shared use of resources and maximum operational security thanks to a standardised back-up solution
- > Simple management thanks to the migration of applications from various different platforms to one standard platform

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Gerrit Meyer, Manager, SAP Customer Competence Center, ITC Germany



ALSTOM

With some 120.000 employees and sales of more than Euro 22 billion in the 2000/2001 fiscal year, ALSTOM is one of the largest global providers of complete solutions in the energy and transport sectors.

The Group, which has its headquarters in Paris, has various divisions, including Power, Energy Transfer and Distribution, Transport, Power Conversion and Marine. Apart from shipbuilding, the German ALSTOM Group serves the same markets as its parent group. Employing around 11.000 people, the company achieves sales of Euro 2,4 billion. With offices at more than 40 sites, the company is represented throughout Germany.

Challenge: Server consolidation and central hosting of the SAP infrastructure

Various types of IT infrastructures at ALSTOM's various German offices, along with a number of decentralised SAP systems (some of which are operated by external service providers) were to be transferred to a standardised IT service concept in 2002.

One aim was to consolidate the „Mission-Critical Applications“ systems in the data centre. This goal meant that the SAP systems would be operated within the data centre and made accessible to the 2.000 or so SAP users

across Germany. Responsibility for implementing this project was given to ALSTOM's Information Technology Center (ITC) in Germany, which is headed by Daniel Liyew, IT Director of ALSTOM Germany, and which would act as an internal IT service provider for all offices.

The German SAP team from ALSTOM, under the supervision of Gerrit Meyer, has extensive SAP expertise and was accredited as an SAP Customer Competence Center in December 2000. This „virtual“ team handles all the SAP tasks for the ITC Germany's entire domain of responsibility.

The SAP systems consolidation team included Günther Schmidt (ITC), Eberhardt Deiß (Compaq) and Günter Caspar (COS Concat AG) as Project Managers, Joachim Fuchs (ITC) as Project Manager for Migration and Michael Raabe as Technical Project Manager.

Comprehensive evaluation process to analyse the solutions available

As with every IT consolidation project of this size, ALSTOM first conducted a comprehensive evaluation process to analyse the technical possibilities and procedures. „We were extremely fortunate, thanks to the newly-established ITC Germany, since we



were able to develop and immediately implement a comprehensive and end-to-end concept for data centre hosting“, recalls Daniel Liyew.

When the project first began, the individual sites used a number of SAP solutions and projects – all of which had agreed deadlines and requirements based on various hardware and software suppliers. The challenge now was to provide ALSTOM's internal customers with a solution that not only took account of these conditions, but also made further technical development and cost reductions possible.

Compaq and COS Concat AG deliver the most impressive solution

At the end of this extensive evaluation process, ALSTOM chose to work with Compaq and its partner COS Concat AG. The deal was clinched due to the overall concept and the tried-and-tested technology on offer.

The COS Concat system house, headquartered in Bensheim, acts as general contractor for the overall project, proving itself to be a highly-professional and extremely flexible partner in the design and implementation of complex SAN and cluster environments.

The hardware platform for the SAP systems is provided by AlphaServer DS20s for the development and standby database, and by clustered AlphaServer ES40s for quality assurance and production. All the servers are linked via a standardised Storage Area Network (SAN), which is based on state-of-the-art Compaq SAN technology. This ensured that the best possible conditions were in place for flexible and effective storage management and backup. The backup system installed during the project, which is based on Legato software, supports end-to-end, cross-platform data backup in the ITC Data Center.

Challenging schedules

„Teamwork really pays dividends. Thanks to our highly successful partnership with Compaq and COS Concat AG, we were able to consolidate the servers used for our SAP operations in less than six months“, said Gerrit Meyer, Manager of the SAP Customer Service Center, ITC Germany. „On a project of this size, we would normally have had twice as much preparation time as we did for this one“, explains Günter Caspar of COS Concat AG. The tight schedule called for ultra-efficient coordination processes and total commitment from everyone involved. „In this situation, the excellent partnership between COS Concat AG and Compaq, along with the

unflinching commitment of everyone involved, really won the day“, confirms Günther Schmidt, ITC.

Scalable system environment

The decision to install a server farm was also taken in order to provide flexibility for the further expansion of the overall system. The Legato backup solution integrated in the ITC Data Center is to be expanded to not only ensure the security and availability of the SAP system data, but also to provide data backup for the other applications used by the ALSTOM Group. This also applies for the archiving solution implemented in conjunction with IXOS. „The Compaq SAN is already proving its outstanding flexibility and scalability – so much so that we don't anticipate any technical hurdles whatsoever when we extend it to include other areas of application“, confirms Gerrit Meyer.

The SAP infrastructure will be operated and managed by ALSTOM's German SAP team. The members of the team are based at various sites, and look after the consolidated systems „remotely“.

Technology and solutions

Hardware:

- > Server farm with 20 AlphaServer ES40 and DS20 E systems from Compaq
- > Ten EMA12000 storage subsystems with a total of up to 600 hard disks and a total capacity of 15 TB
- > Two ESL9326SL tape libraries with a total of 16 SDLT drives and cloning in a second fire section
- > Fibre Channel Fabric made up of ten Compaq Fibre Channel SAN switches
- > End-to-end maximum availability and disaster prevention for SAP, archives and backups

Software:

- > Compaq Tru64 UNIX 5.1
- > Compaq TruCluster Server 5.1
- > Legato Networker backup solution
- > IXOS archive

Conclusion

Under tremendous time pressure, Compaq has implemented a new data centre concept with clear specifications on behalf of ALSTOM Germany. Top priority was given on this project to consolidating ALSTOM's SAP systems.

The early inclusion of everyone involved ensured maximum commitment and synergies when the concept was being optimised and implemented.

The implemented technical solution has impressed ALSTOM's internal customers and confirms the goal of the server consolidation project.

ALSTOM – Global specialist on the energy and transport infrastructure markets

In the energy sector, ALSTOM is involved in the generation of electricity, the transfer and distribution of power and electricity conversion. In the transport sector, it focuses on the rail traffic and shipbuilding industries.

ALSTOM offers its customers a comprehensive portfolio of products and services, includ-

ing components, systems and services ranging from planning and implementation to commissioning and maintenance. ALSTOM is an acknowledged expert in the fields of system integration, turnkey project management and the use of pioneering technologies.

In the last fiscal year (31 March, 2001), ALSTOM achieved sales of around Euro 25 billion, and employed more than 140.000 staff in over 70 countries worldwide.

Following the sale of its Plant Engineering and Technical Services division (contracting sector), which was finalised on 20 July 2001, ALSTOM now achieves sales of more than Euro 22 billion and employs around 120.000 people in over 70 countries around the globe.

The company is listed on the Paris, London and New York stock exchanges.

Apart from shipbuilding, ALSTOM Germany is active in the same areas as ALSTOM. As a complete provider of electricity generation and supply systems for end users and systems for local public transport and long-distance traffic, the German ALSTOM Group is one of the leading

companies in its areas of activity. The German Group employs around 11.000 people and achieves sales of more than Euro 2,4 billion.

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COS Concat AG

COS Concat AG is the German arm of COS Computer Systems AG's IT commerce and system integration division. COS Computers Systems AG is based in Baden, Switzerland. The company, founded in 1973, has been listed on the stock exchange since 1987 and achieved sales of CHF 1,274 billion in the 2001 fiscal year with a workforce of 755. COS Computer Systems AG's target markets include Germany, Austria, Switzerland, France and the United Kingdom.

COS Concat AG's portfolio of products and services spans

an extremely wide spectrum - including consulting, sales, installation, system and project management, training courses and service. This extensive portfolio centres around essentials such as SAP installations, storage and backup solutions for UNIX, Windows NT or Open VMS environments, plus SUN Solaris and server-based computing.

Alongside ALSTOM, COS Concat AG's customers include companies such as Deutsche Bundesbank, ABB, Merck, Thyssen Krupp Stahl AG and FraPort AG.

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