



WACKER CHEMIE GMBH

SUN ARCHITECTS SCALABLE CLUSTER ENVIRONMENT FOR SAP SYSTEM

KEY HIGHLIGHTS

Company

Wacker Chemie GmbH
www.wacker.de

Industry/Market

Chemicals

Products/Services

- 2 Sun Enterprise™ 10000 servers
- Sun Enterprise 4500 server
- Sun StorEdge™ A5200 disk arrays (2 TB)
- Solaris™ Operating Environment
- Sun™ Cluster software
- SAP System

Key Business Challenges

- Deliver high-performance, scalable, 24x7 platform to support SAP System

Key Business Solutions

- Sun consultants designed robust cluster solution, with scalability to support database growth

Key Business Benefits

- Performance consistently and substantially exceeds customer-defined benchmarks: 240% demand on database, 270,000 concurrent dialog steps, response time for dialog steps 50% faster
- Nearly 80% reduction in monthly run time
- Met aggressive 2-month time to market; delivered solution 1 week ahead of schedule
- Scalable, reliable solution to support future growth

“The Sun clustered server architecture gives us all the flexibility we need. Frankly, we are delighted, and we intend to shift our platforms increasingly towards Sun. That says it all.”

*Oswald Schnappinger,
Application Operations and Services Manager,
Wacker Chemie GmbH*

When a multinational, 16,000-employee company has successfully migrated its entire business software infrastructure from a mainframe to a client-server environment, it wouldn't normally be intimidated by the prospect of a mere software release upgrade. But when Munich-based Wacker Chemie GmbH prepared to upgrade its SAP System from release 3.0F to release 4.5B, it realized that the upgrade could choke its database server—barely a year old and already nearing capacity.

“The source of the problem,” recalls Thomas Zielonka, head of the Wacker Chemie Computer Center, “was the inherent SAP System requirement that the database be installed on a single server. Not only were our hardware vendors unable to supply a larger database server, but they estimated only a 50 percent chance of success in tuning the existing server to accommodate the upgrade within the required timeframe. Our statistical forecasts predicted that without a major hardware modification, the database simply would not survive the release upgrade.”

Not wanting to take any risks, Wacker Chemie quickly evaluated its options, and decided to call on Sun Professional Services to replace the existing SAP System server with a clustered Sun Enterprise™ 10000 server solution. The challenge for Sun was twofold—it needed to comply with stringent, contractually stipulated performance benchmarks, and the production deadline was less than two months away.

Sun consultants rose to the challenge. The Sun team developed an implementation plan based on two test migrations and migrated the 350GB development system to the production Sun Enterprise server cluster running the Solaris™ Operating Environment and Sun™ Cluster software. The team also performed all required interface adaptations and SAP system configuration.

Surpassing the Benchmarks

The migration process was accompanied by rigorous testing procedures, many of them specifically designed by Sun Professional Services. Throughout the testing phase, the Sun team strove to substantially surpass Wacker Chemie's own stringent benchmarks.

In the first test run, the testers generated a maximum demand of 240 percent, rather than the required 70 percent to 140 percent. For peak performance testing, Sun consultants generated 270,000 concurrent dialog steps, compared with an actual peak of 165,000 steps achieved by 1,400 concurrent users.

Results improved even more after database access optimization. Wacker Chemie's benchmark response time of 1,000 ms per dialog—contractually stipulated as a prerequisite for SAP System release 4.5B—was practically cut in half. Best of all, the Sun project team had the server cluster fully operational a full week ahead of schedule.

Wacker Chemie GmbH is poised for continued growth with a Sun Cluster software solution supporting its SAP system.

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Release Upgrade Without a Hitch

With the hardware migration completed long before the deadline, the actual release upgrade of the SAP System proceeded according to plan. Sun also helped ensure that all interfaces for add-ons and proprietary developments were transferred without a hitch. The installation was further optimized during the days and weeks following the upgrade. Notes Oswald Schnappinger, application operations and services manager, Wacker Chemie, "The post-run times, for example, showed that a monthly run, which had taken about 13 hours under SAP System 3.0, initially required considerably more time after the 4.5 upgrade. Sun intervened with software modifications and, today, the run time for this job has been reduced to as short as three hours."

Geared Up for Growth

Wacker's most decisive criteria for assessing the Sun Enterprise 10000 server solution are stability and performance in the cluster as well as the scalability of the total solution. "Although our installation hasn't reached its limits by a long shot, it is good to know that our systems will be able to grow considerably in the future," says Schnappinger. "If the database requires more space, we can simply delete a partition from the server and expand the database server accordingly. The Sun clustered server architecture gives us all the flexibility we need. Frankly, we are delighted, and we intend to shift our platforms increasingly towards Sun. That says it all."

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