IBM

SK Corporation sharpens reporting with solutions from IBM and SAP.

Overview

- **Challenge**

  Standardize and integrate business-management processes and provide quick and accurate business information

- **Solution**

  IBM and SAP enterprise resource planning system that enhances business management processes and provides quick and accurate business information

- **Why IBM?**

  IBM servers were deemed scalable, available and reliable; SKC&C, an IT subsidiary of SK Corporation, wanted to leverage its extensive IBM mainframe skills

- **Key Business Benefits**

  Easier and more accurate decision making; more granular approach to reporting, enabling more effective management control; low total cost of ownership; dramatically improved system availability

SK Corporation sees itself as a global marketing company that expands existing businesses and new projects throughout the world by building up global networks between customers and suppliers.

Seoul, Korea-based SK Corporation (SK) is a world-class oil and chemical company that's expanding its business into oil and gas exploration, coal, power, and even Internet services. Remarkably, the company started in 1963 as YuKong with a single refinery plant. Since then, it has acquired the largest market share in the Korean oil refinery industry with US$12 billion in revenue.

With such growth, SK (*www.skcorp.com*) must be sure that its reporting and planning systems are robust enough to maintain control over its burgeoning

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Key Components

Software

- IBM DB2® Universal Database™ for z/OS™, Version 7.1
- SAP® R/3® 4.6C Oil Industry Solution
- mySAP.com

Servers

- IBM @server zSeries™ 900
- IBM @server pSeries™ 600
- IBM TotalStorage™ Enterprise Tape Library

Services

- IBM Global Services - Business Innovation Services

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– Kyu-Pae Chun

enterprises. However, this has not always been possible. "In the past, SK's legacy systems were isolated and could not interface efficiently with each other," says Kyu-Pae Chun, ERP senior manager, SK Corporation. "We needed new systems to standardize and integrate our business processes."

Choosing SAP with IBM infrastructure

Seeking to maintain control of costs and sales in its petroleum refining and sales units, SK chose to implement an enterprise resource planning (ERP) system to enhance business management processes and provide quick and accurate business information. Deciding that mySAP.com modules would provide the desired functionality and accessibility for 2,000 potential users, SK implemented mySAP.com as its e-business platform in conjunction with SAP R/3 4.6C Oil Industry Solution (IS Oil).

For scalable and high-performance hardware support of its SAP software, SK evaluated UNIX® servers from Hewlett-Packard, Sun and IBM. "We decided that because of its stability, availability and reliability, we would go with the IBM @server zSeries running our mission-critical database—IBM DB2 Universal Database, Version 7.1," comments Young-Chul Yoon, deputy director, SKC&C, an SK IT subsidiary. To complement the zSeries servers, the company chose IBM @server pSeries servers to host the mySAP.com application servers.

SKC&C implemented the solution itself, but sought specialized support in troubleshooting the system. IBM Global Services - Business Innovation Services provided system tuning and related technical guidance to help optimize the SAP software on the IBM hardware.

"With the IBM and SAP solution, management can receive production and sales data from the very beginning of a transaction," says Chun. "It is expected that this enhanced reporting will make management's decision-making more timely and precise."

Creating seamless processes to automate workflows

From accounting to manufacturing, the IBM and SAP solution enables employees to work more efficiently and provide more accurate data for analysis. Using a Web browser, employees log onto a wide range of mySAP.com modules, including Controlling, Financial Accounting/Asset Management, Sales and Distribution, Investment Management, Materials Management/Warehouse Management, Production Planning, Project System, Plant Management, Human Resources and Treasury. Collectively, the new modules are used to track the company's oil refining and sales processes from materials to delivery, with the aid of custom-designed legacy systems.

SK has built up more than 10 new Web sites for e-business support in sales and procurement. The new SAP GUI front end is integrated with approximately 55 applications, including Web sites, firm banking, workflow based on IBM Lotus® Notes® and IBM POS systems. These systems manage processes ranging from logistics to workflow and collaboration, production performance, inventory and shipments. SKC&C used XML and many other technologies, including VisualBasic, to integrate legacy systems with mySAP.com modules. Using the new SAP software with these legacy systems, employees can leverage disparate business processes together to improve efficiency.

For example, by integrating materials management and its Internet procurement system with its IBM Lotus Domino™ workflow and e-mail systems, SK enables employees to automatically request approvals for their orders by accessing the e-mail systems of management. If the proper manager approves the order, it automatically goes into the ERP system for further processing.

With the new SAP modules, management not only receives its data on time, but the data is already integrated and processed, which makes decision-making easier and more accurate. The company can also analyze performance data by organization and business unit. "Previously—using our legacy systems—SK was able to report on 30 profit centers. Now, with our IBM and SAP solution, SK can break those 30 centers down into more than 100 profit centers—a much more granular approach that enables greater control over our enterprises," says Chun. For example, SK's former petroleum business was split into its current Retail Market, Direct Sales, Liquefied Petroleum Gas, Bunkering/Aviation, and Storage and Transportation businesses.

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–Young-Chul Yoon, Deputy Director, SKC&C

Managers at SK Corporation use the company's IBM and SAP solution to understand in detail how areas of the company are performing.

Reliable infrastructure supports mission-critical applications

To optimize the availability and performance of its SAP applications, SK chose a production environment consisting of a zSeries 900 database server and three pSeries 660 application servers. Its development environment includes another zSeries 900 database server and a pSeries 660 application server. The production database server is connected to the application servers using 10/100 Ethernet and gigabit Ethernet cards and is backed up to an IBM TotalStorage Enterprise Tape Library. The company uses a third zSeries 900 server and a fifth pSeries 660 server in its quality-assurance environment.

"The zSeries (formerly S/390) gave us the most comfort in choosing a database server," says Yoon. "We know that with its meantime-to-failure of over three decades, the zSeries will make our mission-critical data available whenever we need it. And with the powerful processors and outstanding performance of the pSeries, we can enjoy the benefits of rapid and efficient transactions and receive the most value from our mySAP.com investments."

SK has built an infrastructure solution with lower total cost of ownership than those presented by Hewlett-Packard and Sun. And the company is able to utilize in-house mainframe skills rather than having to hire new administrators. The IBM mainframe also meets SK's need for the highest availability and scalability, which enables the company to do business in an on-demand environment and grow with new business models.

"Previously, we had to take our systems down from two to four hours every day," says Chun. "In contrast, our new SAP systems are available 24x7." Among the available data are the 1.6TB IS Oil database and a 1TB Human Resources database. Despite the size of these databases, users can easily and quickly access the information they need.

In the future, SK plans to build on its SAP foundation to further refine its reporting and analysis capabilities. "We've just implemented SAP Business Information Warehouse to help us provide more accurate reports to management, which in turn will help us add value for all our constituents," says Chun. "We're relying on our robust IBM infrastructure to get the maximum results from this investment."

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