

SAP Customer Success Story Oil and Gas



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S. Ramasamy, General Manager, Indian Oil Corporation Ltd.

AT A GLANCE

Summary

New Delhi-based Indian Oil Corporation Ltd. (IOCL) took advantage of offerings from the SAP® Solution Management Optimization portfolio of services, available through SAP Active Global Support, to improve 25 of 100 target customer-developed programs. The result: marked improvements in system performance.

Web Site

www.IOCL.com

Key Challenges

- Eliminate costly performance bottlenecks and other problems caused by customer-developed programs
- Improve database consistency
- Enable faster, more accurate reporting

Project Objective

Optimize system performance and ensure knowledge transfer

Solutions and Services

SAP Solution Management Optimization: SAP Business Process Performance Optimization service and SAP EarlyWatch® Alert service

Why SAP Services

Provided basis for solving one of the company's biggest problems

Highlights

- Involved a 10-day workshop for 10 IOCL IT people
- Addressed typical problems in 25 customer-developed programs
- Transferred knowledge to IOCL

Key Benefits

- Enabled IOCL team to address another 75 problem programs
- Reduced customer program load on the system from 55% to 35%
- Saved costly hardware upgrades
- Permitted optimum utilization of existing hardware
- Provided higher performance
- Established faster average response times for online transaction processing
- Ensured end-user satisfaction

Implementation Partner

SAP Active Global Support

Existing Environment

- SAP R/3® software, functionality now found in the mySAP® ERP solution
- Legacy applications

Database

Oracle

Hardware

HP

Operating System

UNIX

INDIAN OIL CORPORATION

Company Turns to SAP® Active Global Support to Optimize System Performance

“Over the years, we have written a large number of customer-specific programs – 850 in all,” says S. Ramasamy, general manager, Indian Oil Corporation Ltd. (IOCL). “Many of these programs developed very high overhead, and as we added more locations, more and more users were also added. End users began to complain that the system response was poor. We decided something had to be done.”

New Delhi-based Indian Oil Corporation, the world's 18th-largest petroleum company, is also India's largest enterprise and is ranked 170th in the FORTUNE Global 500 list (2005). For fiscal 2003, the company generated profits of US\$1.6 billion on sales of US\$29.8 billion.

IOCL's countrywide network of 10,144 retail outlets is supported by 165 bulk storage terminals, 95 aviation fuelling stations, and 87 LPG bottling plants. The SAP® ecosystem necessary to support this environment is commensurately extensive.

Massive Database – Poor Performance

IOCL's SAP landscape comprises 458 locations with about 4,000 concurrent users. Since its initial SAP implementation in the early 2000s, the system has grown substantially, with the addition of those 850 customer-developed modifications adding measurably to the overhead. “For example, we have developed more than 500 reports across all SAP modules,” notes Ramasamy. “In addition, monthly growth of our database is on the order of 70 gigabytes; its current size is one terabyte.”



IndianOil



Eventually, performance began to suffer, and end users became dissatisfied. “The performance problems started surfacing as the size of the database crossed around 500 GBs,” says Ramasamy. “We faced the problem of some reports getting timed out, and the runtime of many daily reports was stretching into hours. At this point, end users started complaining about the slowness of the systems, and they were working extended hours to complete the daily business.”

IOCL responded by taking some preliminary measures. “As a quick fix, we moved the reporting load to night by having users submit reports at nighttime instead of running them during the day,” says Ramasamy.

Improved Performance and Throughput

IOCL turned to offerings from the SAP Solution Management Optimization portfolio of services, which are available through SAP Active Global Support, and began to process regular SAP EarlyWatch® Alert reports. These confirmed that IOCL-developed programs were putting a heavy load on the systems

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and needed to be optimized. The company then asked SAP Active Global Support to provide it with the SAP Business Process Performance Optimization service. Both SAP Business Process Performance Optimization and SAP EarlyWatch Alert are services of the SAP Solution Management Optimization portfolio.

SAP Business Process Performance Optimization improves the performance and throughput of SAP solutions. This service focuses on eliminating performance problems caused by customer programs, expensive structured query language (SQL) statements, the ineffective use of SAP standard transactions, and unnecessary data processing. On-site SAP consultants analyze core business processes and use this information to develop an action plan. The service pays dividends: by tuning critical customer programs, it enables companies to eliminate costly performance bottlenecks. Customers profit from optimized response times and throughput of their SAP solutions. They see results in the optimal use of their system resources, making the most of their investment through increased productivity, higher acceptance by end users, and improved database consistency. They also can ensure high performance from future developments through knowledge gained by staff about customer program optimization.

“SAP Active Global Support consultants delivered a workshop to 10 of our people,” says Ramasamy. “They helped identify the programs that cause performance issues, the reasons behind the problems, and the remedies. We identified the top 100 programs that had to be improved, and out of those we selected 25 programs for the workshop. SAP experts taught us how to analyze the coding and also suggested ways to improve performance.” Having learned what they needed to know, the IOCL team members went back and recoded the other 75 offending programs.

The results were remarkable.

From 30 Minutes to 1

Overall load on the system from customer programs dropped from 55% to 35%. As a result, costly hardware upgrades have been postponed or eliminated. Existing hardware is now being used to its optimum capacity. The entire system is delivering higher performance, with faster response times for online transaction processing across the board.

Ramasamy cites examples. “We had one custom report that provided the details about our tank trucks in transit,” he says.

“It was a very useful service in terms of involvement and input and the expertise available from SAP. We strongly recommend using it periodically to improve performance.”

S. Ramasamy, General Manager, Indian Oil Corporation Ltd.

“The report used to take about 30 minutes. After optimizing the program, it now runs within a minute.” Another print program that used to take 10 minutes now runs in less than 1 minute as well.

The SAP service has also had lasting effects on IOCL’s approach to program development. All new programs and reports are now being written with performance as the criterion instead of just functionality. To maximize utilization of system resources, ABAP™ program optimization has become an ongoing exercise.

End-User Satisfaction

In IOCL’s case, however, improved system performance was only a means to an end. “More important than monetary benefit is internal customer satisfaction,” says Ramasamy. “Poor performance ‘demotivates’ the end users. Any time your performance is not good, people may not be willing to move from legacy applications to the new ones.”

Ramasamy sees more potential for this SAP service in the future. “Ours is a large organization. We do a considerable number of transactions, so certain tables are very heavily used,” he says. “The Indian taxation rules also are extremely complex, so particular tables are heavily loaded. I imagine SAP could look into that and take care of future performance issues.”

Summing up, Ramasamy sees important ramifications of the SAP Business Process Performance Optimization service delivered by SAP Active Global Support. “It was a very useful service in terms of involvement and input and the expertise available from SAP,” says Ramasamy. “We strongly recommend using it periodically to improve performance.”

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