

"Oracle Partitioning is an effective lever for enhancing the long-term system stability of mission-critical SAP applications. It's associated with higher performance, optimizations in database reorganization, and savings in hardware resources."

- MANUEL HONEGGER,
Head of Development, Member of the Management,
Coop Switzerland

RETAILER COOP IS BENEFITING FROM ORACLE PARTITIONING



Industry:

Commerce/Retail

Turnover:

Over 15,5 billion CHF 2006

Workforce:

Around 45,800

Oracle products & services:

- Oracle Database 10g
- Oracle Partitioning
- Oracle Advanced Customer Service (ACS) for SAP

Swiss retailer Coop has improved its SAP system stability thanks to Oracle Partitioning. The company is now in a position to respond quickly and effectively to any negative impacts on SAP system stability.

The Coop Group has one overriding objective - to become Switzerland's number one retailer. And the company is certainly on the right track to achieving its goal, even despite ongoing changes in the industry and evolving customer behavior. The retail giant's sales have risen continuously in recent years, reaching around 15.5 billion Swiss francs (CHF) in 2006. The workforce has also grown to more than 45,800 while the number of stores has mushroomed to almost 1550. Coop is also involved in a number of cooperations at international level.

Making sure the huge range of goods and products arrives in stores or markets at the right time and in the right quantity requires a sophisticated logistics system. But it also depends on powerful and well-functioning IT. That's where Coop's SAP corporate solutions combined with the Oracle database come in. The retail group completed the move to SAP ERP and Oracle 10g last year. There are also several SAP BW systems running on Oracle. The number of SAP users is around the 4500 mark, and the size of the Oracle database is currently about 8 TB. The hardware platform is Sun (Solaris) while the disk subsystems are from Hitachi.

Oracle: Strategic system partner

Manuel Honegger, Head of IT Development at Coop, explains: "We made a conscious strategic decision in favor of Oracle." The high-profile company also relies on Oracle Advanced Customer Service for SAP, utilizing a range of made-to-measure support services.

But that's not all. As an SAP user Coop decided to use Oracle Partitioning – and for very good reasons. "There's no question that the SAP-Oracle combination works brilliantly. But when you need to process very large volumes of data with SAP, the SAP table design quickly reaches its limits. If you don't implement optimizations, you put system stability at risk. This can result in business processes no longer being correctly supported by corporate solutions, or in some cases not supported at all. Oracle Partitioning is an effective lever for enhancing or achieving the long-term system stability of mission-critical SAP applications," says Honegger.

Coop handles enormous volumes of data. Movement data alone accounts for a massive 10 TB. Every week the enterprise moves and processes five million order items. These are orders for local stores being transferred to headquarters and processed there in order to dispatch goods deliveries. For these processes Coop needs maximum system performance and availability from its SAP systems. If any difficulties arise during this stage, business continuity is put at risk.

Oracle Partitioning: The winning card

It was when two key problem areas were identified that Coop's IT team decided to act to improve system stability. The first problem was reduced performance and the second was that data volumes were growing at an above-average rate, particularly movement data. These problems were analyzed from different perspectives.

A conclusion was soon reached: "We were able to show that an optimized data archiving concept using Oracle Partitioning would enable us to improve the situation. Most importantly, with Oracle Partitioning you can partition disproportionately large tables. This allowed us to efficiently split and archive logical structures in different physical segments, which had a positive impact on SAP system stability," explains Honegger.

In concrete terms the analyses revealed that a number of tablespaces were five times bigger than was normal. Some were growing to a volume of 800 GB, with a few even amounting to 1000 GB.

Oracle database specialists at the Oracle for SAP Solution Center in Walldorf worked with Coop to develop a concept for implementing Oracle Partitioning with maximum efficiency. In a first step the team identified which tables were good candidates for partitioning. The partitioning criteria were then defined for each table. It was important that integration into the SAP system was as seamless as possible to ensure optimum functioning and keep administration as simple as possible. This is achieved by linking the partitioning criterion with the SAP number range table NRIV. This strategy ensures that both SAP archiving and the performance-critical SQL statements are optimally supported. Finally, tests were carried out to check the effectiveness of the various measures. "The result was exactly what we hoped for. Put simply, after implementing Oracle Partitioning the system wasn't big and heavy any more. Oracle also helped us significantly increase our SAP system performance," says Honegger.

Other focus of optimization

Having achieved all these improvements, which resulted in optimized data archiving, it was time to make further use of Oracle Partitioning. But this time the focus was different. The aim was now to increase resource capacities, and in particular to leverage Oracle Partitioning in such a way as to take the strain off the disk subsystems to the tune of around 2 TB. In this project, both tables and indices were optimized with the aid of Oracle Partitioning with the specific aim of cutting down on resources. This too was achieved in a team effort between Coop's IT department and the Oracle database specialists. At the end of the day the 2 TB reduction was achieved thanks to more efficient means of database reorganization – all through the use of Oracle Partitioning.

Honegger sums up: "It was Oracle Partitioning that enabled us to enhance our system stability in the face of substantial growth in data volumes and therefore avoid potential downtimes. As an SAP user handling large volumes of data we benefited from Oracle Partitioning in several ways. SAP supported and verified our approach."

As part of an ongoing optimization process for system stability there are plans to use Oracle Partitioning as a kind of proactive early-warning mechanism. Should system stability be impaired, for any reason, Oracle Partitioning will be employed to nip the problem in the bud.



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