



Cement Manufacturer Gains High Availability, Improves Business Performance with Real Time Reports

Overview

Country or Region: India

Industry: Manufacturing

Customer Profile

Madras Cements, a part of the Ramco Group, is one of the prominent names in the cement industry in south India. Established in 1961, it ranks among the leading manufacturers of cement in India, one of the few to do so at an economical rate.

Business Situation

To help the management make effective business decisions, Madras Cements wanted to provide real time insight into data. At the same time, the company wanted to reduce downtime, increase performance and improve availability.

Solution

Madras Cements deployed Microsoft SQL Server 2012 to take advantage of a robust database solution including the AlwaysOn feature to improve availability.

Benefits

- Provides actionable insight
- Boosts availability to 99.99 percent
- Reduces costs significantly
- Provides real time reporting
- Eases database administration

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N Varadarajan, Senior General Manager – Information Technology, Madras Cements Ltd

Madras Cements Ltd (MCL), a leading cement producer in India, wanted to improve the performance of its MIS and data warehouse. The company also wanted to do away with its complex and slow database infrastructure and achieve faster access to information. After evaluating options, MCL upgraded to the Microsoft SQL Server 2012 data management software. As a result, the company has improved its business performance with real time access to analytics information. By using SQL Server 2012 AlwaysOn, the company has acquired access to high availability and disaster recovery features. The company has improved business intelligence capabilities and empowered business users. Ultimately, better data analysis leads to better business decisions. Costs have also come down. Additionally, the solution has simplified database administration and significantly reduced reporting time.



"With the new solution, our top management and business users can immediately gain clear views of the data. Today, reporting is significantly faster and it takes employees 50 percent less time to render reports."

N Varadarajan, Senior General Manager – Information Technology, Madras Cements Ltd

Situation

Madras Cements Ltd (MCL) is the flagship company of the Ramco Group, a well-known business group of south India. Headquartered in Chennai, India, MCL is the sixth largest cement producer and one of the largest manufacturers of Portland cement in India. With five state-of-the-art production facilities spread over the south, the company has a current total production capacity of 12.49 MTPA.

MCL also produces ready-mix concrete and dry mortar products, and operates one of the largest wind farms in the country. It makes use of the latest technology and equipment for all production purposes.

The company keeps data from all transactional processes, including invoicing, cheque receiving and cheque issuing in its Ramco ERP system. However, reports cannot be generated from the ERP database directly. Therefore, MCL was maintaining a separate database for reporting. "We cannot have the same database for our reporting and ERP needs," explains N Varadarajan, Senior General Manager – Information Technology, Madras Cements. "ERP is the transactional database, which is least indexed because of performance needs. On the other hand, the database for reports is highly indexed."

MCL was facing several challenges, as both databases were not synchronized. Plus, reports were not online and such offline data was affecting decision. Performance was also an issue as some data required access to a live server. As a result, the transaction operations were becoming slower.

Each morning, the reports database was populated. This data was used to generate reports. The system had worked well in the past except that the reports were based

only on the morning data. "Because the reports' database is updated once a day in the morning, we don't get current data," explains Varadarajan. "A lot of things can change during that time and because the reports may often not reflect current data, this may result in making wrong decisions."



MCL felt that the decision-making ability was hampered without the ability to visualize and leverage real time data. The company therefore needed a solution that would not only improve business agility, but also ensure that data is accurate and consistent.

Solution

In January 2012, MCL began evaluating leading database platforms for a scalable solution that could support its business growth needs. These included Oracle, IBM, and Microsoft. After an extensive review of various options, the company decided to upgrade its databases to Microsoft SQL Server 2012. MCL attended a roadshow conducted by Microsoft and also went through a demo given by the Microsoft team. "We were already accustomed to working with Microsoft technology," says Varadarajan. "Plus, the support and collaboration that we receive from Microsoft is excellent."

Internally, the company carried out trial sessions using SQL Server 2012. Varadarajan adds, "We have some 10–15 key processes and we wanted to run these on a training server just to be sure that they work without any issues. We finally did the changeover on a Sunday and though there were problems, we had full support from Microsoft. The system is now fully stabilized."

For MCL, the SQL Server 2012 AlwaysOn feature was of particular interest, both for



its high availability and disaster recovery capabilities. AlwaysOn is configured using windows clustering. Using this feature, the ERP data is in sync with the disaster recovery server, which provides live back up.

Additionally, MCL was also interested in the data compression feature of SQL Server 2012. This new feature can dramatically speed up database query processing time. "Because we have a high number of transactions, these used to stand in a queue in the earlier version," explains Varadarajan. "We regularly had complaints of deadlock or the system being extremely slow. Now, because data is handled in a compressive way, queries are executed faster. The queue has reduced by 50–60 percent."

Currently, the company's SQL Server data warehouse is used for ERP and MIS. A large number of IT users access the data warehouse simultaneously. "Earlier, we faced connectivity problems across our locations," says Varadarajan. "The database was not able to handle the increase in the number of transactions. Now, our database is optimized. Plus, we completed our 2012–13 accounts without any hitch."

With SQL Server 2012, MCL has a single version for all business operations. The software's versatile analysis and reporting options are used throughout the operational process from inventory analysis to business decisions.

Benefits

By deploying SQL Server 2012, MCL improves the availability and performance of its databases, accelerates reporting, increases staff efficiency, and simplifies data integration work.

Provides Actionable Insight

Earlier, because reports were based on morning data, accurate and real time information was not available. Deeper insight into data makes it possible for MCL to increase control over manufacturing and boost efficiency. For instance, the logistics department needs to know how much cement is in stock in various warehouses before dispatching more.


"This isn't just about dispatching cement; it's about output," says Varadarajan. "We can only dispatch how much we produce; there is a limitation on stock. Therefore, it is important that we intelligently choose where the cement should be dispatched." He adds, "Excellent analysis and real time reporting capabilities offered by SQL Server 2012 help the logistics department to create an accurate dispatch plan. That information leads to better knowledge of the warehouses, which in turn leads to better decisions."

Boosts Availability to 99.99 Percent

With the new solution, MCL has more control of its business continuity plans using the high availability and disaster recovery features of SQL Server 2012. By using SQL Server 2012 AlwaysOn, the company has significantly reduced the downtime of its critical databases related to scheduled maintenance and unscheduled failures. Varadarajan says, "With SQL Server 2012 we have the required performance and availability. The AlwaysOn feature is exactly in line with our online reporting needs. Our applications are offline for only a maximum of 60 minutes during failover. We have increased the overall availability of our databases and applications to 99.99 percent."

Reduces Costs Significantly

With online reports and a detailed dispatch plan at hand, MCL is significantly saving on



costs. Cement is sent by railway wagons to all destinations and from there it is loaded in trucks to be sent to warehouses and warehouses.

Varadarajan explains, "Earlier, without accurate data, we were sending cement to all warehouses. If for some reason we were not able to clear the railway wagon within the specified time, we had to pay demurrage charges. Plus, if the warehouses were already stocked, our trucks would remain there till unloaded and we would have to pay huge halting costs/demurrage. Now, with absolute real time information on stock, we have significantly reduced our costs."

Provides Real Time Reporting

The biggest benefit for MCL moving to SQL Server 2012 has been the ease in generating reports. Current business data is critical to make business decisions. "With the new solution, our top management, and business users can immediately gain clear views of the data," explains Varadarajan. "Today, reporting is significantly faster and it takes employees 50 percent less time to render reports. Overall, it increases the speed of decision making."

Eases Database Administration

MCL not only streamlined its database infrastructure but significantly reduced data management time. Previously, employees were spending a great deal of time on database tuning, data distribution, and other operations. With SQL Server 2012, many maintenance tasks are now automated, which increases staff efficiency and productivity.



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