How Overstock.com reduced its Oracle database size by 1TB and achieved dramatic performance improvement

Challenges:

- Business success translated into tremendous data growth over a short period.

- Applications were sluggish and queries time consuming.

- Disaster Recover and Standby sites also required more space.

- Patching and upgrades grew increasingly more difficult.

- High performing SAN space is costly.

- As a 24/7 online retailer, down time to implement solutions was not an option.

The Business

Overstock.com is a leading retailer based in Salt Lake City, Utah. With more than one million products on its website and 1,500 employees, Overstock's year over year growth has been explosive since its start in 1999. The company's revenues have grown from $1.8 million to $1.2 billion in 2011, in large part because of its customer service based approach to offering a variety of high-quality products at great values. Overstock relies on its technology to offer shopper's bargains and suppliers an alternative inventory distribution channel. The company is publicly traded on NASDAQ.

The Challenge

Success, however, almost brought Overstock.com to its knees. Increased sales, products and vendors combined to create a perfect storm of data clogging the retailer's Oracle EBS and other systems. Applications were performing sluggishly, queries took longer and indexing the data could not alleviate the pressure. Regular maintenance, such as instance cloning and patching were time consuming and more difficult. Disaster recovery processes were overloaded and standby instances also demanded more space. High performance SAN alleviated the problem, but the costs were prohibitive as a long-term solution.

In 2007, robust fourth-quarter sales showed Overstock's systems were pushed beyond their capacity. "Thanksgiving to Christmas is our busiest season," said Corvin Deus, Development Lead, ERP Systems for Overstock. "We were watching our systems closely and trying to prepare for those busiest times. In '07 the system was basically brought to its knees, and we were very concerned about it crashing the system."

Answers were not simple or cheap, however. Deus and his team considered options ranging from bigger and faster hardware, application architecture changes, database tuning and purging and archiving. Overstock refreshed its hardware, began working on its application architecture and tuned its database. Wholesale data purging would not be an acceptable business process for the retailer.

The results were less than impressive, Deus said. Overstock made it through its 2008 fourth quarter, but realized the measures implemented could not be sustained over time. Better solutions were critical for the company, and an RFP was initiated.

> "
> The relationship is very important. Find a partner. Someone who will work with you. Solix really listened to what we wanted, what we needed and helped us accomplish those goals.
> "

— *Corvin Deus, Development Lead, ERP Systems for Overstock.*

SOLIX®
Empowering Data Management

Business Impact:

- Solix EDMS Archiving Module addressed the problems created by huge data growth that multiple other efforts could not.

- EDMS archiving has allowed Overstock to maintain its data at 2.4 terabytes, while archiving 1 terabyte, for more than two years.

- Solix EDMS allows Overstock to implement its own unique business rules interacting with a number of interfaces and databases.

- Implementation was straight forward and simple, allowing business to carry on without interruption.

  - **Business users have experi enced better performance across all systems, and the ability to access archived data is transparent.**

- Overstock has only begun to tap into the possibilities of ILM offered by the Solix EDMS.

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Solix streamlines the Overstock database

The RFP opened the eyes of Deus and his team to new options. They partnered with Solix and began examining the critical issues facing the retailer. "The Solix team were really good at coming in and helping us analyze our data and the growth patterns we were having," Deus said. "They made some really good recommendations around the areas we should target first." Inventory and inventory transactions became the first target for archiving along with Overstock's custom data outside the Oracle EBS.

As a 24/7 online retailer, Overstock needed to implement its solutions seamlessly, with little or no down time. The Solix EDMS Archive Module easily interacted with Overstock's multiple interfaces and heterogeneous databases. Deus and his team were able to create customized archiving tasks that run weekly, bi-weekly, monthly and quarterly and have been able to target specific columns of data to trigger the archiving, giving Overstock tremendous flexibility in creating its own business rules for data management.

Fourth Quarter performance in 2009 improved after the Solix installation, and the need for hardware refreshes due to capacity or performance concerns abated. The ease of the initial installation has continued. Deus said the Solix commitment to working with the Oracle EBS, as well as interfacing with all of Overstock's systems, has been impressive. Patches and updates have been simple.

The Overstock primary database stood at 3.4 terabytes in 2009. The Solix EDMS Archive Module has allowed Overstock to archive 1 terabyte of data, leaving the live database at 2.4 terabytes, despite continued growth. With the expertise of the Solix team Overstock targeted another 700 GB of data in its order and shipping data suitable for archiving.

Deus said 2012 growth is expected to be in the double digits and the retailer will double its product selection, increase its vendors and offer even richer product attributes on each sku. The Solix EDMS Archive Module has ensured Overstock's systems are prepared for the growth.

Solix streamlines the Overstock database

Since partnering with Solix, Overstock has spent significant time developing detailed business rules for its archiving tasks. Implementing those rules has been straight forward and simple through the Solix EDMS Archive Module, Deus said. Before implementation business users were skeptical. They quickly learned archived data is easily accessible in a completely transparent way.

Archiving is just one part of Information Lifecycle Management, Deus said. Data masking and subsetting are other strategies Overstock is considering. "Solix has the tools to do that as well," Deus said.

Solix has been much more than a software vendor for Overstock, Deus said. They have been true partners in showing the retailer a litany of possibilities for a comprehensive ILM. Solix has worked closely with Overstock to implement a strategy unique to the retail giant, making the solution one that has been easy for the Overstock team to maintain and update. With Solix, Overstock has been able to maximize its "bang for the buck," Deus said. "The solution is complete and relatively easy to maintain," he added.