

Improving Application Performance With Solix Database Archiving Solutions

1) What are the problems if data is not archived?

Databases have grown far larger than envisioned by their creators and are filled with unneeded data. Many companies, therefore, are seeking to pare them down to the essentials and archive little used content.

"Data is growing at 125 percent a year yet up to 80 percent of this data remains inactive in production systems where it cripples performance," said Charlie Garry, senior program director at Meta Group. "To compound this problem, many enterprises are in the midst of compliance initiatives that require the retention of more data for longer periods of time, as well as consolidation projects that results in significant data growth."

Database systems which have not adopted data archiving face a lot of problems like rising storage costs and lower performance. They continue storing unneeded data that has no value after certain time. They maintain these unwanted data, which includes maintaining the server thus increasing the storage cost.

Here is an instance of a company, which used data archiving to improve its performance and while at the same copying with the rigors of global compliance issues: Tektronix Inc. of Beaverton, Ore., focuses on test measurement and monitoring products. All company financial data resides in one huge Oracle database. Previously, Tektronix operated 486 different legacy systems internationally. Countries like Japan, India and China utilized complex systems and unique character sets. "Every legacy system required its own hardware, software and IT resources," said Lois Hughes, senior business systems analyst for Tektronix. "As we kept adding countries, we magnified the complexity."

Tektronix current production environment involves Oracle 10.7 running in all countries. This means two instances of Oracle:

- 1) Oracle Financials for accounts payable (AP), General Ledger (GL), and other transactional systems running on a Sun UE5000 database server with 8 x 336 MHz processors and 3 GB of memory. This instance is 35 GB
- 2) Oracle Customer Fulfillment -- invoicing, accounts receivable (AR) etc. This production database is approximately 85 GB and consists of a Sun UE6000 box with 12 x 248 MHz processors and 6 GB memory. It also includes a forms server -- a Sun S2000 with 10 x 60 MHz processors and 2 GB of memory.

This system experiences a fairly constant traffic volume of about 800 concurrent sessions throughout every part of the day and night. Hughes notes that the fewer the number of instances for Oracle financials, the lower the costs. Standardization also meant that the company could improve its level of customer responsiveness, gain worldwide inventory visibility and reduce worldwide IT expenditures. The monthly closing of financials can now be done in three and a half days.

However, this philosophy brought its own set of problems. The database soon expanded to 60 GB, rising at a rate of 1.25 GB per month. Performance began to suffer. "Despite tuning exercises and hardware upgrades, the increased growth rate caused performance to decline," said Hughes. "Run times for batch programs increased despite fewer numbers of executions."

Faced with rising storage costs and lower performance, the company investigated data usage patterns. It realized that running all data from all time periods in one system was slowing down current transactional traffic. Over time, data usage declined sharply. Yet users reported that simple queries of current transactions took ages -- enough time to go for a coffee, have a chat and then return to your terminal to view the results.

2) Different solutions:

Data can be organized or stored for backup. Through tiered storage, snapshotting, backup-to-disk, and/or virtual tape libraries, backing up and recovering data has improved dramatically from the old standard process of backing up directly from primary disk to tape (and hopefully being able to locate and recover from tape back to disk when needed).

Data can also be archived, where the records are removed from the production systems and are preserved or kept for easy access and reference until the retention has expired or the data stored has no more business value.

Below given is the solution adopted by the above company to solve its problem's: Tektronix compared the costs and potential results obtainable from its two routes forward,

- a) Keep buying disks, networks, servers, processes and people or
- b) Implement best practices to manage data growth via intelligent archiving.

As b) appeared to be the most attractive, the IT department's first inclination was to utilize its own resources and existing software. They looked at purging as the best option for reducing the data footprint.

However, international finance regulations meant that purging would have to be paralleled by archiving. Hughes reports that Oracle itself possessed several bugs in its purging functions. The company attempted to develop its own purge/archive software. But when management realized that could take two years, it looked elsewhere. The goal was to be able to manage data by country, while at the same time centralizing it. As well as the differing languages and character sets, many countries have wildly divergent data retention regulations.

The company adopted a data archiving system, which functioned in conjunction with Oracle to purge and archive data. Hughes successfully embarked upon a pilot project to solicit buy-in for corporate wide international adoption.

As a result, the company now carries out archiving of transactional data every three months. Initially, information is recategorized (reduces in priority within the same Oracle instance, then moved to a less expensive infrastructure. The users, however, are able to access all data from one screen without headache. The results: improved database efficiency from the end user perspective in terms of queries and reports; reduced storage requirements; data retention is now fully compliant by country; and reduced time to backup. "Queries are now instant," said Hughes. "Overall, we have benchmarked a 46-percent improvement in our financial performance by implementing archiving."

3) What is Solix solution and why is it better?

The Solix Data Archiving Approach

The Solix Technologies Enterprise Data Management Suite leverages a common metadata repository to organize, retain, secure and manage enterprise information. The EDMS foundation is the Enterprise Metadata Manager, which captures metadata from packaged enterprise and custom applications as well as several databases. This enables database administrators to map metadata between applications and define conversion rules used as the basis for policy-based archiving. The mapping construct also ensures that the archived information can still be accessed by the primary application and database. A central location for metadata provides organizations with the necessary foundation to more effectively manage information—especially databases and associated applications—by enabling administrators to establish retention policies and quickly locate content that has been archived and secured.

The core Solix Enterprise Metadata Manager creates a central knowledgebase by analyzing the customer's environment, which can be supplemented by pre-populated modules and tables provided by Solix's Enterprise Data Archiving for Oracle E-Business Suite and other business applications. For example, Solix enables Oracle customers to see the various data growth rates of all application modules, such as General Ledger or Accounts Payable. After this initial assessment, customers can determine specific classification policies and templates that need to be created to manage the information more effectively.

Solix Enterprise Data Archiving includes retention solutions for Oracle E-Business Suite, Oracle PeopleSoft, Oracle JD Edwards and custom applications. This wide range of support enables seamless extraction and movement of database information amongst all tiers of data storage, while simultaneously ensuring the data can be accessed for query or reporting purposes by the various applications.

4) Conclusion:

It has become evident that organizations are realizing the importance of archiving and are adopting data archiving technology, which not only has many advantages like reducing costs, securing data but it can also increase your productivity.

Solix EDMS is a management system that restores application performance across your enterprise with the new standard in data archiving. Built to address the most pressing challenges of enterprise data growth, Solix Enterprise Data Archiving solves compliance, cost and performance requirements with advanced archiving technology. With Solix Enterprise Data Archiving, organizations can classify data, configure and execute archiving and data migration routines and ensure data remains secure at every step of the process giving you back complete & streamlined control

over your enterprise data.

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About the Author

Interested in topics related to Data Archive.