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zData Perspectives
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IMS is Alive and Kicking

Although I usually cover DB2 in this column, we will take a short break this issue. The purpose of this column is to examine data management issues on IBM's zSeries platform and DB2 is not the only game in town. So this month let's check on the status of IBM's other mainframe DBMS product, IMS.

IBM celebrated the 35th anniversary of IMS last year – which, in this industry, is a very long time for a software product to thrive. Even more amazing is that IMS continues to grow. In just the past 2 years IMS has experienced a 55% growth in terms of MIPS, as well as a new version (V8) with a lot of new functionality and the announcement of yet another new version

(V9) on the horizon. You can connect to IMS databases from just about anywhere these days due to the robust connectivity offered by IMS Connect and the Open Transaction Management Access (OTMA) facility.

While hierarchical database systems have been surpassed in the marketplace by relational and SQL products like DB2, IMS can brag about its long and proud legacy that continues on today. According to IBM more corporate data is managed by IMS than any other database system. IMS manages over 15 million gigabytes of production data. And more than 95% of the companies in the Fortune 1000 use IMS.

In terms of transactions managed, IMS is even more impressive. IBM claims that over 50 billion transactions are run through IMS daily. And close to 200 million users a day are served by IMS. Why does IMS continue to enjoy such success when relational products are more mainstream and easier to use?

One reason is speed. One high-end IMS customer handles 120 million transactions a day; 7 million in a single hour! With IMS data queued sharing on a single processor with database updates IMS handles 21,000 transaction per second and almost 1 billion transactions a day at another site. Another benchmark shows IMS serving 6000 transactions per second across TCP/IP to a single IMS. These are impressive numbers indeed.

Modern application development approaches can be used with IMS, too. The IMS Open Database Access facility (ODBA) provides a callable interface for easier database access. And

as of V7 IMS adds Java support and tools to simplify Java development with IMS. Today, IMS developers can:

- Write Java applets or applications that access IMS transactions with template assistance from the IMS Client for Java;
- Use the IMS Web Studio tool to build end-to-end solutions for accessing IMS transactions from the Internet;
- Use the Java-based IMS Object Connector Class Definition Tool to generate data objects for use by IMS Object application programs;
- Use the class libraries and Java beans of the IMS Connector for Java to develop Java applications that access IMS.

And IMS Java Remote Database Services coming in V9 provides IMS Java application programs distributed access to IMS databases. That means your non-z/OS programs will be able to access IMS data over the Internet using a secure protocol with local or global transaction semantics and a standard API.

And if you haven't created an IMS database in awhile, you might be in for some surprises. HALDB, a new format introduced with IMS V7, allows database partitioning – and you can grow up to 10,010 data sets per database resulting in a database size of over 40 terabytes. HALDB databases also help address some of the pesky management and administration problems that have plagued IMS for years. With self-healing pointers, reorganizing a partition does not require changes to secondary indexes or logically related databases. HALDB also does away with Prefix Resolution, Prefix Update, and secondary index rebuilds. Of course, HALDB requires a

different format so you would have to convert existing IMS databases to take advantage of these features.

IMS also participates in the e-business world of 24/7 applications. Using a combination of IMS and third party tools large organizations of every type are enabling their employees and customers to access business critical IMS data round-the-clock over the Web. The next time you make a flight reservation, access your frequent flyer miles, view your investment portfolio, or track a shipment over the Web just stop and think – "I probably have IMS to thank for this service."

Finally, IMS databases are getting easier to manage. IBM's autonomic computing initiative delivers self-configuring, self-healing, self-optimizing, and self-protecting features to IMS V8. Combine these features with third-party tools that improve availability and simplify reorganization, compress IMS data to reduce storage needs, automate and coordinate changes of system definition elements while transactions remain online, and speed up and simplify backup and recovery of IMS databases and you have a very robust environment for leveraging your enterprise data.

Summary

Truly, there is no need to worry about having to convert your IMS databases to DB2 (or worse yet, another DBMS on another platform). IBM continues to enhance IMS with the features it needs to continue to support your business. Yes, IMS may be old, but it has evolved over the years to support the needs of modern databases and applications. And just because something is old, doesn't make it obsolete. I can vouch for that personally!

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