BUSINESS INTELLIGENCE

with Jackie

DBAs – Yes or No?

As you are all aware, the iSeries community has been saying for years that the DB2/400 doesn't require a DBA (database administrator) while other relational database systems do. Is this true or is this marketing hype? See what you think by the end of this column.

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With DB2/400 your company definitely needs someone who is responsible for functions such as database security and database backup and recovery. Because of the tight integration between DB2/400 and OS/400 these functions are not normally thought to require the level of DBA skill necessary with other databases. Whether you are securing libraries, communication lines or production tables you use the same techniques. Backing up programs, user profiles, and again, production tables all require the same skill set and knowledge. One or more individuals do need to understand how to create DB2 tables or files and also how and when to create indexes over these tables. Index creation and management is very important with any database. You need to understand your application environment well enough to create the indexes over the appropriate columns or fields. You need to know whether you want traditional binary radix tree indexes or whether you want to use EVIs (encoded vector indexes). You also need to know how to monitor the database to see whether you made the right choices and if you need to change your index strategy. The iSeries is making this easier and easier with the database management functions built into Operations Navigator. You can use Operations Navigator to monitor the performance of the database, find out where you are spending your time from a database point of view, check what the system recommends you do and automatically have it create suggested indexes to help performance.

Database modeling has always been, and remains, a necessary task. What physical tables and logical views do you need to have, and how are they laid out? So far I have talked about what you need to do. Next I will show you what you don't need to do. First let me acknowledge that the following list is out of date. It is from Oracle OpenWorld a few years ago. I wanted to use these examples because they are from outside IBM and demonstrate some common functionality required by DBAs working with databases other than DB2/400. This is what you DON'T need to do on DB2/400. You don't need:

- to write 4 lines of code to create database users
- multiple commands to grant authority
- to link the database user to the operating system
- to monitor user object extents
- to monitor tablespaces
- to maintain rollback segments and extents
- 11 lines of code to fix authority errors
- 8 lines of code to determine authorities granted
- to deallocate unused space from tables
- to manually coallesce free space

Other things that you don't need to do with DB2/400 is worry about allocating disk space, updating database table statistics (see last month's "Data Skew" column), keep balancing indexes, synchronizing database and system security and you never need to run utilities to check on the integrity of the database. Many customers who have been with the iSeries and the S/3x before that for many years often don't realize how much functionality is built into the iSeries itself, including microcode, DB2/400 and OS/400 as integral parts of the iSeries.

To summarize, without any question DB2/400 requires someone to plan the database from a usability perspective. This would include data modeling, creating and maintaining tables and indexes, database security, database performance and similar types of functions. On the other hand, DB2/400 does not need a person to look after the low level physical items such as disk load balancing, index tree balancing and disk space allocation. DB2/400 doesn't require someone to perform the multiple tasks discussed above.

What do I think? I think that DB2/400 does require a database administrator but that this job is much more fun on the iSeries than on other platforms. If the term DBA conjures up bits and bytes level tasks and worrying about where you place what table extents instead of high level modeling then then you could correctly state that DB2/400 doesn't require a traditional database administrator. In the end, it is all up to you. T G

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