



Database Consolidation: Reducing Cost and Complexity

Friday, September 17, 2004

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The Bottom Line: Database consolidation projects offer companies the hope of lower costs, greater ease of database administration, and the chance to improve the quality of their database technology by reducing the number of database instances and emphasizing some vendors over others

Database consolidation is a familiar refrain for most companies, according to an AMR Research survey of 251 companies. These projects are typically designed to reduce the number of database vendors a company uses, as well as consolidate data into fewer database instances. Motivations for embarking on database consolidation vary, but cost is a frequent factor. Yet few companies have finished their projects, leaving them with many remaining decisions to be made, and vendors with many opportunities to improve their positioning.

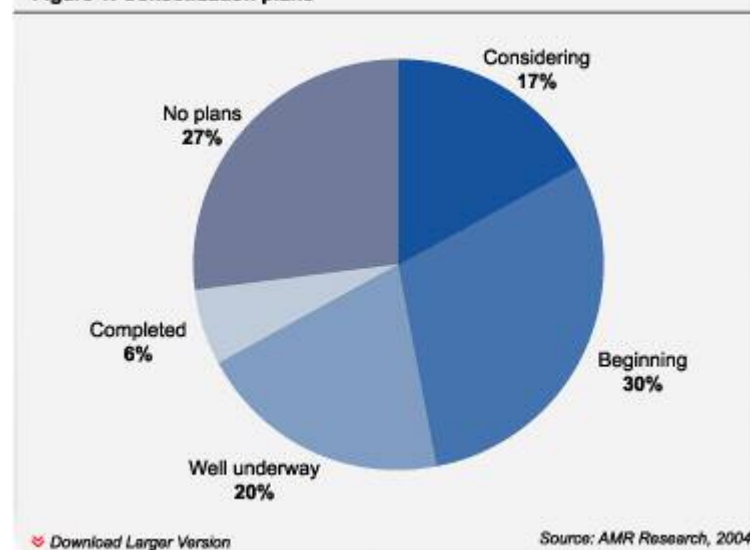
The following are some key survey findings:

- Over 70% of companies are involved in database consolidation projects at some level, but almost half are just beginning.
- Eliminating specific vendors is not the goal, but it is the means. Companies want to reduce the number of database instances, but they do it by focusing on certain vendors.
- Database consolidation is shaping up to be a battle over values: fundamental technical maturity on the one hand, and the burdens of administration and IT costs on the other.
- Among the Big Three databases, *Oracle Database* by **Oracle**, followed by *SQL Server* by **Microsoft**, are winning in the consolidation market.
- Some companies are willing to consolidate so deeply that their primary database vendor changes. *DB2* by **IBM** is having the most difficulty retaining flagship status.

Many are just beginning to consolidate

Database consolidation is very much a phenomenon in progress. A scant 6% of companies have completed a consolidation project, while nearly half are either considering it or in the beginning stages. The number of database vendors a company used at the beginning of the effort made little difference in their consolidation status. Those well underway in a project had an average of 3.2 vendors; those considering or at the beginning, 2.7, and those with no plans, 2.4. While there is some difference among companies at these different stages, it is not profound.

Figure 1: Consolidation plans



Oracle and Microsoft are winning

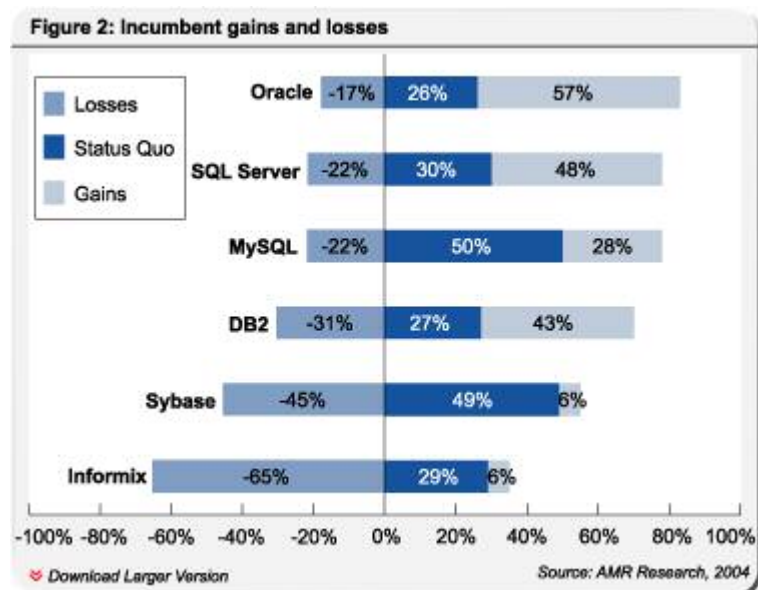
We asked companies whether, as part of their consolidation efforts, they would be increasing, decreasing, or preserving the status quo for their usage of their database vendors.

The results do not separate those eliminating a vendor entirely from those that merely reduce the number of database instances powered by that vendor. This is clearly of mixed consequence for buyers and sellers alike. For example, when companies have a site license from a vendor, changing only the number of database instances may not offer them immediate cost savings. The potential is greater for those with per-server or per-instance licenses.

Oracle ranks at the top. 57% of companies using *Oracle* plan to increase its usage, with *SQL Server* not far behind. *DB2* is trailing, with only 43% planning to increase its usage and 31% planning to decrease its usage. Nonetheless, with 70% at least preserving the status quo, *DB2* remains a formidable force in database consolidation.

The open source database *MySQL* by **MySQL**, although less widely adopted among surveyed companies, is maintaining status quo in 50% of its install base. Notably, in the unusual scenario where companies want to bring in a completely new database as part of consolidation, *MySQL* is the most frequent database under consideration. 23% of all companies involved in a consolidation project plan to evaluate *MySQL* as a new database, while only 10% are considering bringing in *Oracle* for the first time, followed by 9% for *SQL Server* and 7% for *DB2*.

On the opposite side of the spectrum, few express a desire to increase their usage of *Sybase* by **Sybase** or *Informix* by IBM. Yet to *Sybase*'s credit, nearly half remain loyal, with no plans to change platforms.

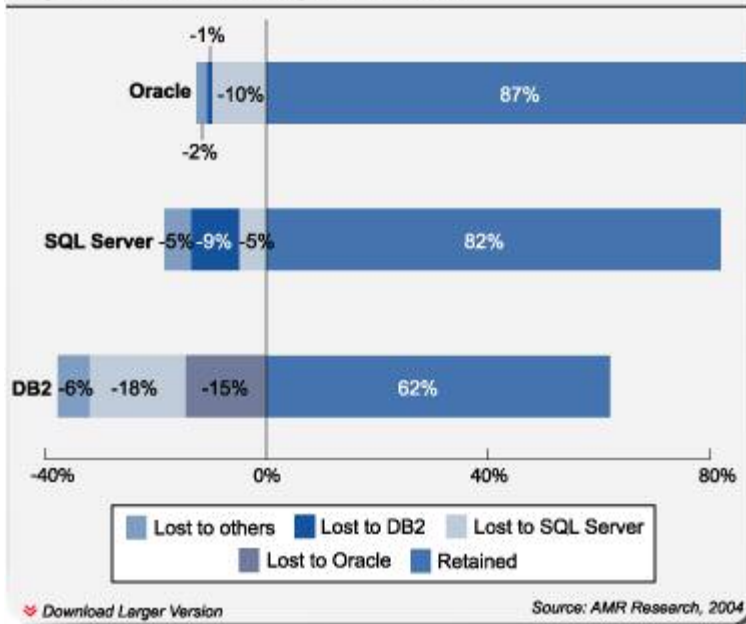


Some companies are making deep changes

Many companies use one database vendor so extensively that they claim it as their primary vendor, declaring themselves an "Oracle shop," for example. A company's flagship database usually survives consolidation efforts fairly well since it is inherently where the company has invested the most in raw data, mindshare, and skillsets.

Nonetheless, there is some remarkable switching activity afoot, and *DB2* is falling behind here as well. Of the companies starting consolidation projects with *DB2* as their primary database, only 62% say it will be their flagship database at the end of the project. Both *Oracle* and *SQL Server* are maintaining flagship status in about 85% of their accounts. *Oracle* is slightly ahead at 87%, although *SQL Server* is the most popular beneficiary of flagship losses.

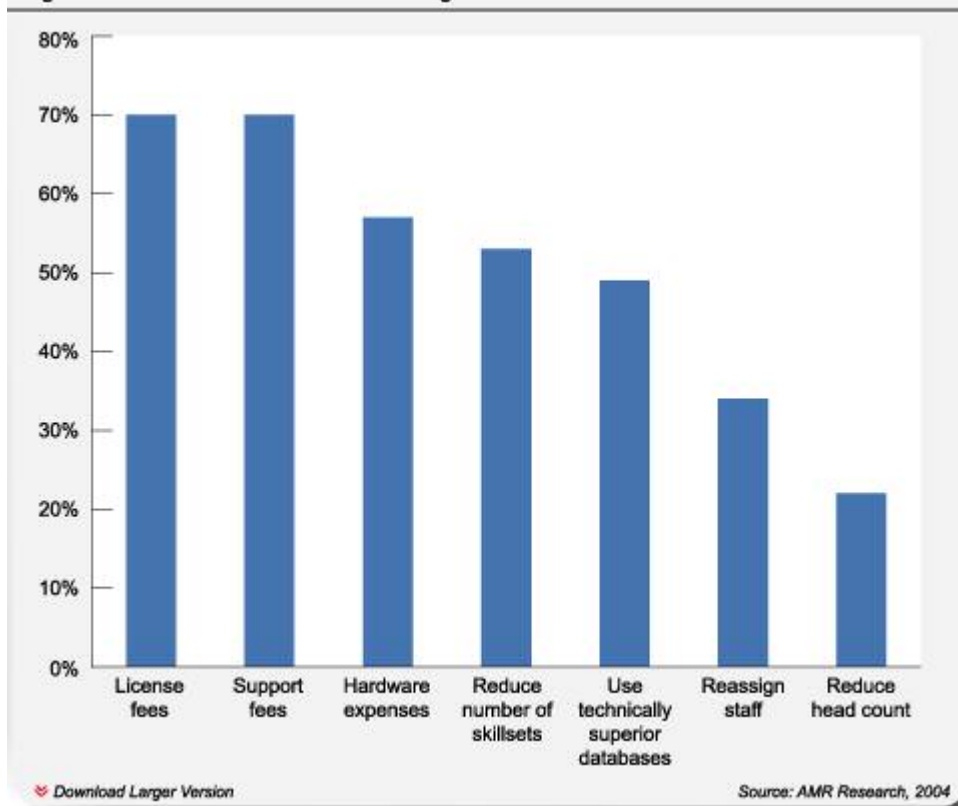
Figure 3: Retention of primary database status



The consolidation debate narrows

When companies are asked about their general goals for consolidation, most say they are consolidating to conserve costs. Many also want to conserve skillsets or use databases that are technically superior. Notably, most are not consolidating to reassign staff or reduce head count.

Figure 4: Initial motivations for consolidating



When consolidation moves from goals to action, these issues begin to take shape—differently for various vendors.

Companies tend to agree with each other on why the usage of a vendor should increase, finding the following impressions particularly relevant to consolidation decisions:

- Companies believe that *Oracle* and *DB2* offer stability, scalability, and performance—fundamental measures of a database’s technical maturity. 29% of consolidating companies using *Oracle* are increasing its use, citing the

prevalence of the Oracle skillset.

- Companies believe that *SQL Server* is easy to administer and offers lower costs. 32% of consolidating companies using *SQL Server* cite the Microsoft skillset as a reason to increase *SQL Server*'s use.

By contrast, there is no widespread agreement on why vendors should be minimized. Some trends in the data include the following:

- The costs of software licenses and support are, by far, the most common reasons given for minimizing both *DB2* and *Oracle*, although approximately the same percentage of companies cite these costs to justify increased usage.
- The cost of hardware is more harmful than helpful to *DB2*.
- Stability, scalability, and performance are the most common reasons *SQL Server* is minimized—although on balance, these factors actually help *SQL Server*.

Each of the following figures shows how often consolidating companies associate a particular reason with their decision to increase or decrease the usage of a particular database vendor. For example, Figure 5 shows the following:

- Overall, 43% of consolidating companies using *DB2* are increasing its usage.
- 27% of all consolidating companies that use *DB2* are increasing their usage of it, citing stability.

Figure 5: Consolidators' reasons for increasing/decreasing DB2

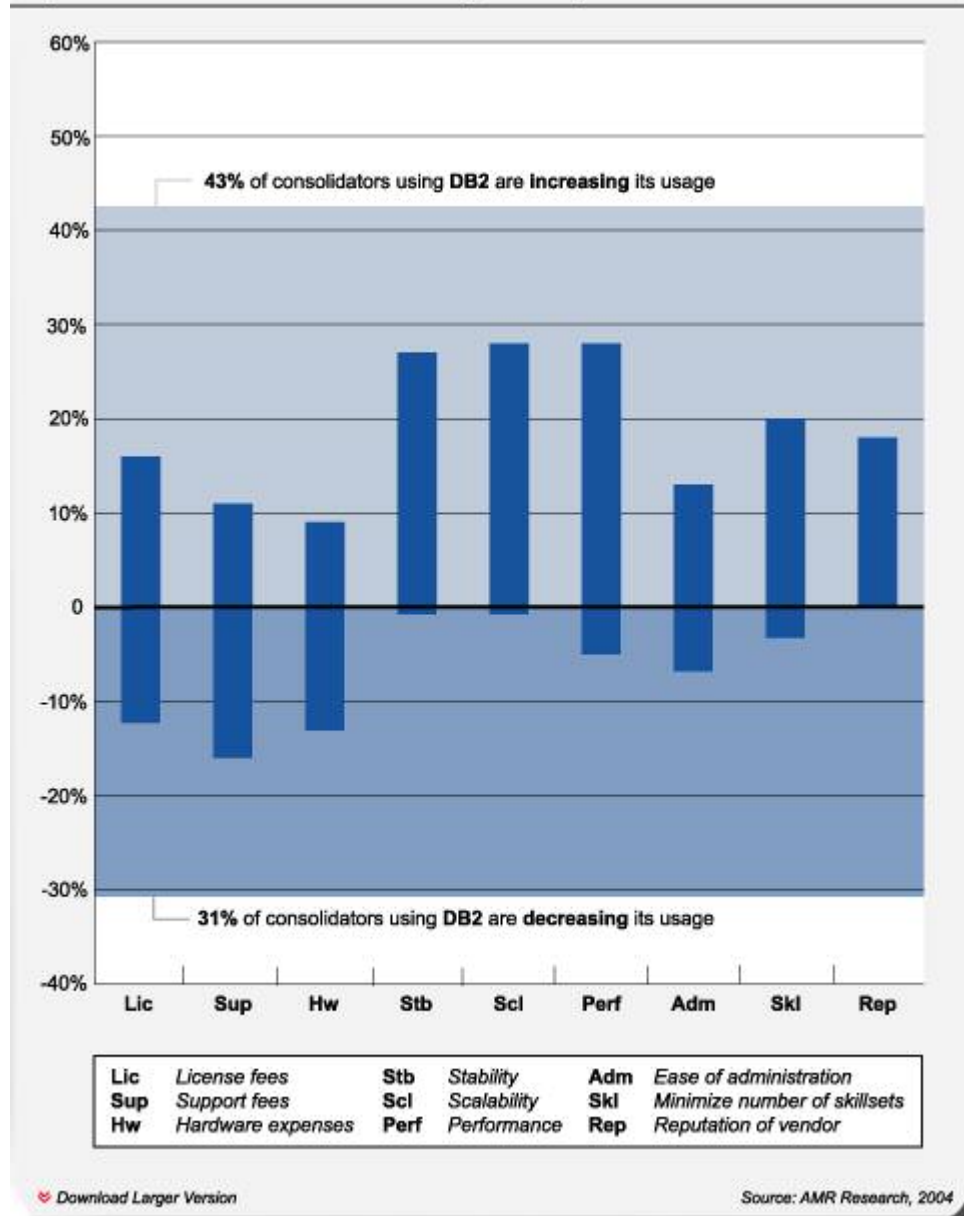
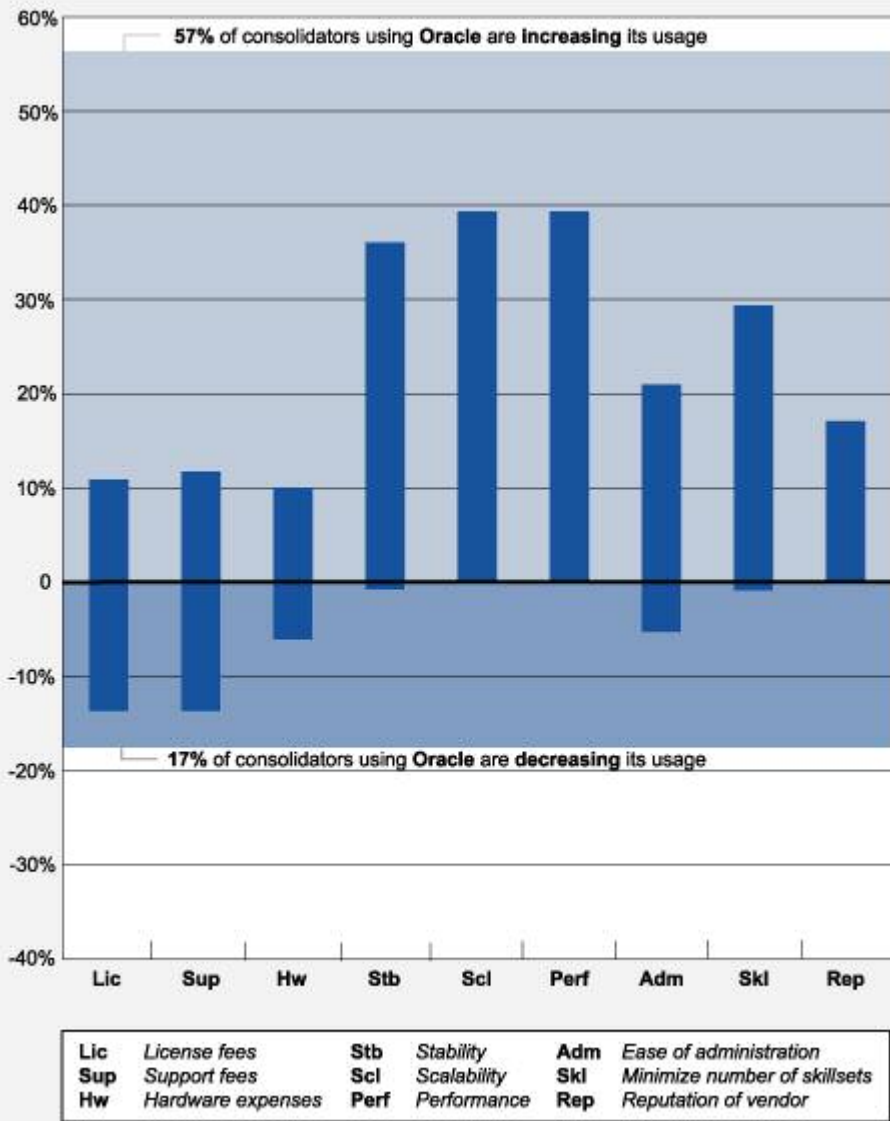


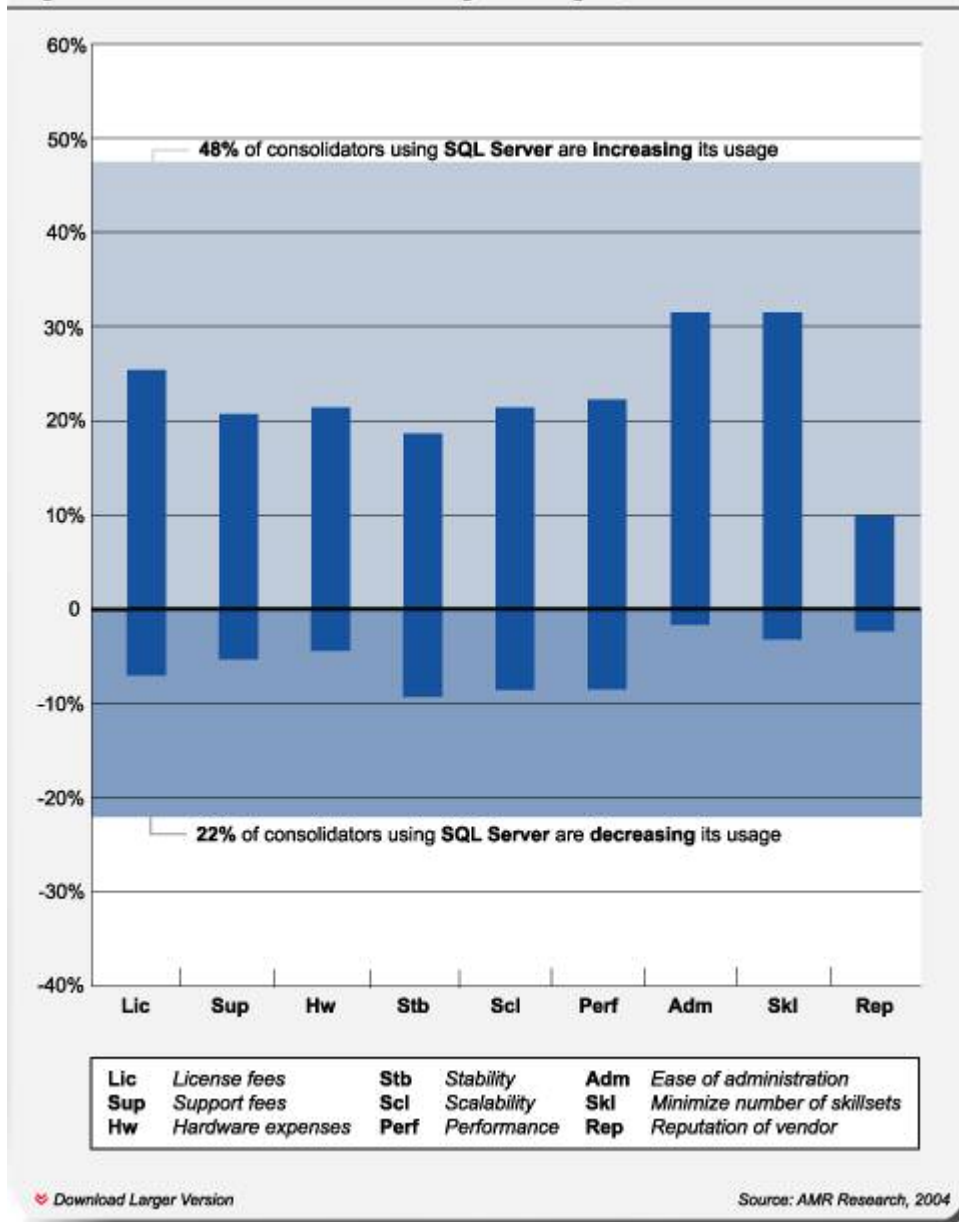
Figure 6: Consolidators' reasons for increasing/decreasing Oracle



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Source: AMR Research, 2004

Figure 7: Consolidators' reasons for increasing/decreasing SQL Server



Since none of the Big Three shows particularly high rates of being minimized, these negative reasons are becoming less relevant to actual decision making. Vendors are successfully convincing companies that the positive outshines the negative. The question then becomes, "Which factors are more important in the eyes of the customer?"

Closing Comments

Most companies do not need to be convinced of the benefits of database consolidation: they're already there. Two sets of values are focusing the debate:

- The quality of technology
- Ease of administration and cost

With almost no projects completed and most in the early stages, the final outcome is very fluid. One thing, however, is clear: Companies are positioned to exercise significant leverage over database vendors as these projects progress.

Methodology

Using an online survey, AMR Research surveyed 251 companies on their plans concerning database consolidation. 75% of respondents have at least 10 years of IT experience, and 35% have more than 20 years of experience. 65% of surveyed companies have dedicated working groups for consolidation efforts. 70% have more than \$250M in annual revenue, and 43% have more than \$1B in annual revenue.

We surveyed companies on their use of 11 databases: *DB2, Informix, MaxDB* by **MySQL**, *MySQL, Oracle, Pervasive SQL* by **Pervasive**, *PostgreSQL, Progress* by **Progress**, *SQL Server, Sybase, and Teradata Data Warehouse* by **NCR Teradata**. Usage was solicited for both Online Transaction Processing (OLTP) and Decision Support Systems (DSS). Sufficient data was returned for *DB2, Informix, MySQL, Oracle, SQL Server, and Sybase*. AMR Research does not believe that the insufficiency of data returned for *MaxDB, Pervasive SQL, PostgreSQL, Progress, and Teradata Data Warehouse* is necessarily indicative of their overall market position.

Companies Referenced in This Report

IBM

Microsoft

MySQL

NCR Teradata

Oracle

Pervasive

Progress

Sybase

Acronyms

DSS—Decision Support System

OLTP—Online Transaction Processing