SAP® DB

SAP's Reliable, High-Performance Database

First-class performance, 100% operational reliability, ease of use, and low total cost of ownership - these are just a few of the extraordinarily high demands that e-business collaboration places on technology infrastructure. SAP helps you meet these demands with SAP® DB, its powerful, state-of-the-art database management system built for high-performance business computing. SAP DB is available as open source software.

HIGH PERFORMANCE AND LOW COST OF OWNERSHIP: AN UNBEATABLE COMBINATION

E-business requires database management systems with the muscle to deliver high levels of performance and availability, as well as the simplicity to free systems personnel from routine operational tasks. SAP DB goes above and beyond, providing all of this in a mature, reliable package at low cost of ownership.

SAP DB works with all SAP applications, embracing numerous database technologies. mySAP.com solutions, such as mySAP Supply Chain Management and mySAP Product Lifecycle Management, rely on SAP DB's innovative abilities to manage complex objects and as the content server for structured documents. In addition, SAP DB supports any other application supporting open database standards. And, at the end of 2000, SAP DB achieved new heights when SAP released the SAP DB as open source package so everyone can take advantage of SAP DB.

SAP DB users enjoy a broad range of advantages:

- High performance and high availability thanks to mature database technology
- Absolute ease of use and almost unsupervised operation
- Simple handling of various types of information, making SAP DB a suitable server for diverse application scenarios
- Seamless integration with multiple application environments through standardized, open interfaces and broad platform support
- No license fees – SAP DB is the only database system in the world suitable for professional use that can be obtained free of charge

STRENGTH AND STAMINA

SAP DB was developed to meet the demands of high-volume online transaction processing (OLTP) that is typical of e-business and applications like mySAP.com.

Its advanced architecture achieves remarkable levels of performance, scalability, and robustness – all characteristics that ideally equip SAP DB to support environments with thousands of simultaneous users, high volumes of data and distributed IT infrastructures. But SAP DB is far more than a workhorse for application systems. In addition to its relational capabilities, recent object-oriented enhancements to its classic relational data model equip SAP DB to handle comprehensive objects and structures, such as those found in supply chain management solutions. And, it has the power to tackle unformatted or partially structured documents that are common to Internet and Intranet applications.

SAP DB's cutting-edge design provides an ideal combination of high throughput and rapid response times. System performance is greatly enhanced by innovative features, including a sophisticated multithread, multiserver architecture, effective lock mechanisms, intelligent optimization of SQL statements, efficient caching, and avoiding writing to mass storage devices whenever possible. Not only does SAP DB fit flexibly into multiprocessor systems or cluster configurations, it also exploits system advantages, such as high availability, without expensive integration. SAP DB's versatile architecture makes it the perfect choice for distributed IT infrastructures. For instance, SAP DB can be used as a central database in three-tier IT environments with thin browser clients and application servers, as is common with components of mySAP.com. In addition, it also supports two-tier client/server landscapes in which application clients communicate directly with a database server.

Round the Clock Operation

SAP DB is designed for uninterrupted, round-the-clock operation. It performs read and write operations in parallel, so you can carry out maintenance tasks, such as modifying configuration, enlarging data or log areas, backing up data, or creating table indexes – all during normal operation and without hindering active users. SAP DB's multitasking capability shortens the time that users need to wait for their work to be accomplished and makes the system continually operational, without maintenance downtimes.

SLIM AND STRONG

With SAP DB, SAP has accomplished "near-zero administration" so that many routine functions happen without an operator's supervision. By automating key installation and operational procedures, SAP DB performs those tasks behind the scenes, freeing systems personnel for bigger picture activities.

For example, the SAP DB database management system (DBMS) sets its own core parameters, according to the system environment. SAP DB automatically defines database objects, such as tables, catalogs and indexes, and the database administrator (DBA) work exclusively at the level of the logical schema. By working smarter in the background, SAP DB allows DBAs to concentrate on core tasks, such as user administration or assigning authorizations, instead of constantly having to monitor system resources.

Reorganization Not Required

SAP DB excels in its modest use of hardware resources and its masterful management of disk space. Because SAP DB dynamically regulates the growth of database objects like tables and indexes, disk space no longer needs to be allocated in advance and regular reorganization runs are unnecessary, resulting in fewer mundane duties for the DBAs of other databases. Also, SAP DB automatically ensures that the capacities of all available hard disks are utilized evenly. Dynamic disk space management

prevents downtime while ensuring consistently high levels of performance regardless of database size and frequency of insert and delete operations.

SAP DB ships with a package of intuitive tools that help DBAs perform the few remaining manual tasks. All database administration tools come with both Windows and browser interfaces so they can be used in any environment and from any location in the world.

SMART AND MULTIFACETED

Although SAP DB was originally optimized as a database engine for SAP R/3, its capabilities today extend far beyond OLTP. SAP DB no longer relies solely on tables to structure information, as purely relational SQL databases do. To collaborate with the myriad of Internet-based applications, SAP DB also handles complex objects and structured documents. For example, the SAP Content Server, and applications based on it like SAP Knowledge Warehouse, use SAP DB to manage their documents. SAP is currently developing an enhancement to SAP DB for Internet-based document storage that complies with the WebDAV standard (Web Distributed Authoring and Versioning). This enhancement will provide a new generation of functions for storing and retrieving XML documents.
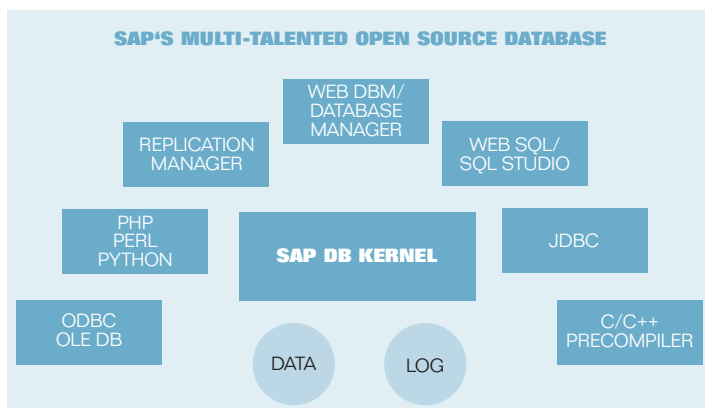
SAP liveCache: Complex Objects in Main Memory
Squeezing data into tables isn't a robust enough approach for some jobs – like optimizing logistics for supply chain management. That's why SAP DB processes object-oriented data structures in main memory, as well as implementing the relational model. SAP liveCache can process large volumes of complex structured data rapidly in main memory. This intelligent combination of relational and object-oriented functions integrates OLTP with newer applications like logistic chain processing. That's why SAP liveCache is an integral part of SAP Advanced Planner and Optimizer, which is delivered with mySAP Supply Chain Management. SAP is currently developing other applications also based on the SAP liveCache technology.

FLEXIBLE AND OPEN

SAP DB conforms to standards in every respect, making it highly suitable for use as a database with non-SAP systems. SAP DB meets the official ISO standard for SQL and allows you to port SQL programs that were originally created for other database systems to SAP DB. In addition, SAP DB provides all the interfaces you would expect of an open DBMS, a precompiler for C/C++, and interfaces for a range of scripting languages to help you to write your own programs. The ODBC driver enables the use of Windows-based office and reporting tools. Finally, the JDBC driver ensures that you can easily connect SAP DB to Java-based application servers as a database engine.

All These Advantages …
SAP DB's many advantages are used in more than 800 successful professional installations. Not only has it proved to be a powerful and robust DBMS, SAP DB has also demonstrated unbelievable versatility in supporting a range of new SAP solutions that rely on its unique functions for processing complex or partially structured data. And, SAP is developing more applications to run exclusively on SAP DB.

SAP'S MULTI-TALENTED OPEN SOURCE DATABASE

WEB DBM/ DATABASE MANAGER

REPLICATION MANAGER

WEB SQL/ SQL STUDIO

PHP PERL PYTHON

SAP DB KERNEL

JDBC

ODBC OLE DB

DATA

LOG

C/C++ PRECOMPILER

… And All This Value

SAP DB provides incredible value: extremely high performance at an extremely low cost of ownership. Because SAP users do not pay upfront license fees for SAP DB, the only license costs they incur are maintenance fees. But SAP DB's unbeatable value is the ease of use, the almost unsupervised operation and the careful use of resources all help reduce the overall operating costs to an absolute minimum.

Availability

SAP DB is available standalone and also supports all mySAP.com components. The following platforms are supported (operating system/processor type):

- Compaq Tru64 Unix / Alpha
- IBM AIX / PowerPC
- SUN Solaris / SPARC
- HP-UX / HP-PA
- Linux / Intel
- Siemens Reliant Unix / MIPS
- Windows NT / Intel
- Windows 2000 / Intel

SAP DB is available as an open source database supporting all the above platforms, under the conditions of the GNU General Public License (GPL). Under these conditions, developers are allowed to modify the source code and make these modified programs available to others. You can download the source code for all modules from the SAP DB Web site at www.sapdb.org, along with the executable programs and the documentation. You can also request an up-to-date version of the complete Web site on CD ROM free of charge from SAP.

SAP DB is developed in close cooperation with SAP's Technology and Application Development departments, ensuring rapid reaction times if problems do occur. Because SAP DB is produced in accordance with the same strict quality standards as all other SAP products, SAP DB offers the same stability, scalability and reliably that all SAP solutions are famous for.