

IBM DB2® Universal Database™ for the Sun Solaris™ Operating System

Data management to optimize your Sun™ servers



Highlights

- Provides industry-leading relational database functionality, with integrated business intelligence and e-business capabilities
- Leverages Solaris Operating System features for maximum performance
- Scales easily from small workgroup servers up to clusters of Sun Enterprise™ 10000 servers
- Solaris block-based buffer pools
- DB2 UDB is SunTone™ certified



> A powerful engine gets even better on Solaris™

IBM™ offers several platform-specific versions of the DB2® Universal Database™. Each has features to exploit capabilities of the platform. DB2 Universal Database provides the same relational database features and functions on every platform it supports. At the same time, the DB2 engine takes advantage of the unique features of the Solaris Operating System (OS), so you can realize the full potential of this operating environment.

A database system that powers your mission-critical business applications must be fast, scalable, and highly available. It should also be built to the highest standards of quality with industry leading support—without costing you a small fortune.

IBM DB2 Universal Database meets all of these requirements. And now, you can leverage the power of DB2 on the Solaris Operating System to achieve the best price-to-performance ratio on today's leading UNIX® platform.

DB2 Universal Database for Solaris OS is the result of a joint engineering effort between IBM and Sun Microsystems. This collaboration ensures that DB2 is tuned, optimized, and quality tested for the Solaris platform. In addition, the SunVIP™ agreement with IBM assures superb support to our mutual customers.

Reduced IPC overhead

Interprocess communications (IPC) overhead on Solaris is minimal, because the light weight semaphores (operating system processes) within Solaris OS are highly efficient, making communication between DB2 processes very fast.

Maximized multitasking bandwidth

DB2 also takes advantage of Solaris OS

semaphores to enable parallel processing by spawning lower level processes from higher level ones. Using the db2ptree program in DB2, administrators can view these executing processes in a simple tree diagram, which shows the process names and relationships.

Asynchronous I/O

DB2 makes use of the Solaris OS asynchronous I/O capability, in which the physical writes occur asynchronously, and control is passed back to DB2. This enables raw device I/O processes to run up to 30 percent faster than processes in which data is stored in file system containers.

Block-based buffer pools

Block-based buffer pool support in Solaris Operating System provides contiguous memory allocations for buffer pool memory and block-based I/O. This speeds retrieval of buffer pool data from disk, and because the pre-fetched data is in contiguous memory in the buffer pool, subsequent access to that data is faster.

Solaris intimate shared memory

DB2 optimizes the asynchronous background processes to free buffer pool space by writing updated pages back to external data storage. On the Solaris OS, the use of buffer pools is even more advantageous because allocated

shared memory is pinned in RAM using Solaris Operating System intimate shared memory. Pinning shared memory helps ensure that memory accesses are very fast since the memory can never be paged out to the swap areas. This helps improve performance, since most data requirements are usually satisfied by data resident in memory.

Low-level system calls

DB2 Universal Database uses Solaris OS-specific system and library calls where possible, which tend to be more efficient than those used by other flavors of UNIX. For example, DB2 uses the Solaris `pread` and `pwrite` commands which, on Solaris, perform a seek and an I/O in a single system call.

Whether your applications run exclusively on Solaris or on a mix of platforms, standardizing on IBM DB2 Universal Database is the smart way to maximize application performance and availability, while reducing the overall cost of your business computing environment.

Learn More

For more information about DB2 for the Sun Solaris Operating System, please contact your Sun or IBM representative, authorized reseller, or visit our websites at:

sun.com/db2

ibm.com/software/data/sun

For complete descriptions of the features and functions of DB2 Universal Database, please visit ibm.com/software/data/db2

Sun Microsystems, Inc. 4150 Network Circle, Santa Clara, CA 95054 USA **Phone** 1-650-960-1300 or 1-800-555-9SUN **Web** sun.com



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