

Debugger

The dbx debugger is an interactive, source-level, post-mortem and real-time debugging tool which is available through the command-line, IDE and stand-alone graphical debugger (dbxtool). Ensuring application reliability, the dbx debugger is scriptable, multi-thread aware, and provides memory leak, access and usage information to track down difficult bugs.

Thread Analyzer

Improving developer productivity and software robustness, the Thread Analyzer identifies hard-to-detect threading errors before they occur. The tool identifies potential race and deadlock conditions at runtime, maps them to source lines in the application, and then allows the user to view the results using command-line or GUI options.

Application Performance Analyzer

The Performance Analyzer identifies application performance bottlenecks by specifying not only which functions, code segments, and source lines are impacting performance, but by also providing the tools necessary to tune for optimal performance. From annotated compiler commentary listings where the compiler indicates optimization status to runtime thread performance, users can visualize performance hotspots using the GUI interface. The Performance Analyzer can be used to profile both single-threaded and multi-threaded applications.

DLight

Solaris Dynamic Tracing (DTrace) technology allows you to explore your system, understand how it works, and track down performance problems across many software layers by giving you a comprehensive view of the entire system, from the kernel to the application. DLight is a

visual profiling tool that unifies application and system profiling using DTrace technology on Solaris platforms, providing new levels of insight to dramatically reduce development timelines.

Technical Computing

Sun Studio provides many features to support the development of performance-demanding technical computing applications, including:

Fortran Compiler

Sun Studio software delivers a Fortran compiler that produces record-setting runtime performance. The Fortran compiler provides compatibility options for the Fortran77, Fortran90, and Fortran95 standards to support the existing base of codes in the technical market. Support for the OpenMP 3.0 specification is included. It uses the same high-performance code generation technology as the C and C++ compilers, ensuring that the resulting application generates the highest performance parallel code for the newest Sun UltraSPARC®, Fujitsu SPARC64-, Intel x86-, AMD x86- based systems.

Sun Performance Library

The Sun Performance Library is a set of optimized, high-speed mathematical subroutines for solving linear algebra and other numerically intensive problems, enabling HPC, financial and other compute-intensive applications to benefit from a performance boost. The Sun Performance Library contains enhanced and newly added standard routines including, BLAS, LAPACK, FFTPACK, SuperLU, Sparse Solvers, and ScaLAPACK.

MPI Analyzer

The MPI Analyzer allows developers to visualize the performance of distributed MPI-based

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developers.sun.com/sunstudio

COMPANION PRODUCTS

- *NetBeans™ IDE*
- *Sun HPC Cluster™ Tools*

applications via intuitive graphs to reveal performance hotspots in a clustered environment. Basic application profiling data is available as well as various MPI messaging statistics, such as message length, inter-node message count, and message latency.

System Requirements

Sun Studio 12 Update 1 is available for the following platforms:

- Solaris 10 1/06 and subsequent updates (SPARC & x86)
- OpenSolaris 2008.11 and 2009.06 (SPARC & x86)
- Oracle Enterprise Linux 5 (x86)
- SuSE Linux Enterprise Server 10 (x86)
- Red Hat Enterprise Linux 5 (x86)
- CentOS 5 (x86)

For more information, please visit:

developers.sun.com/sunstudio/features/sysreq

Licensing Support

The software license for Sun Studio 12 Update 1 comes at no additional cost. Support options, which range from single incident to comprehensive developer plans are available to ensure high developer and team productivity.