

Sun™ Studio 10 Software for Linux Platforms

Developing Reliable, Scalable, and High-Performance Applications
for the Linux Operating System



Key feature highlights

- Compatible with GCC 3.2 software
- Provides an integrated development environment (IDE) — built on the NetBeans™ open tools platform and tuned for the needs of the C and C++ developer — that enables applications to be edited, compiled, debugged, and tuned easily
- Includes multithreading development tools for developing and tuning multithreaded/multiprocessing applications
- Provides a visual GUI builder to quickly develop graphical user interfaces in the C, C++, and Java™ programming languages
- Supports the Sun Java™ Desktop System, Release 2; SUSE LINUX Enterprise Server 8; and Red Hat Enterprise Linux 3
- Supports CVS 1.11, ClearCase V2002 u2, and PVCS 6.7.00 source code control software (not supplied by Sun)

Sun™ Studio 10 software provides a comprehensive, productive environment for developing applications using C and C++ for the Linux operating system. In addition, it also provides support for workgroups that need to integrate their projects in both Java™ and traditional programming languages.

Turbocharge Applications With Multithreading Technology

Sun Studio 10 software can help you achieve higher system throughput with multithreaded applications.

Boost Programming Productivity and Application Quality

The Sun Studio 10 integrated development environment (IDE) is built on the award-winning NetBeans™ platform. The IDE integrates modules such as text editors, tools for working with source code (C, C++, and Java), performance analysis tools, a GUI builder, and more. The IDE is easy to use, yet designed to meet the demands of even the most sophisticated development needs.

Integrated editors help you write and understand programs more quickly. You can easily traverse build errors in source code via hyperlinks or be more productive writing code with your choice of integrated editors.

Debugging is easy with the graphical user interface, which can provide a significant boost from basic to advanced features. Set breakpoints, examine variables, and navigate the call stack — all via the debugger's convenient menus and buttons. You can even debug mixed languages (C, C++, and Java) seamlessly. With Sun Studio 10 software, you can tune for best application performance with sophisticated performance analysis tools.

Develop Client-Server Applications — Quickly

The included X-Designer software helps you quickly and easily build sophisticated GUI applications with greater quality. Existing GUIs can be imported even if there is no source code. Upon design completion, a built-in code generator automatically generates portable C, C++, or Java source code at the touch of a button. Based on standard Internet protocols, you can build Java technology-based front ends to existing C and C++ server-based applications and deploy clients.

Built on the award-winning NetBeans tools platform, Sun Studio 10 delivers both performance and portability, significantly improving programmer productivity and portability to the AMD64 architecture.

Integrated Programming Environment

Editing

- Choice of three tightly-integrated editors (built-in NetBeans, Vim, and XEmacs) for editing and browsing with hyperlinks that enable easy navigation and referencing

Building

- Executes build jobs in parallel on single or multiple machines distributed on a network

Debugging

- Graphical and command line debugging of:
 - Multithreaded applications
 - Shared and dynamically linked libraries
 - Running processes
 - Core files
 - Assembly language programs
 - Java language support for seamless stepping through C, C++, and Java programs
- Program control and data evaluation features:
 - Set conditional breakpoints, postbreak modifiers, and watchpoints
 - Trace program statements and variables
 - Navigate the call stack
 - Evaluate expressions and functions
 - Monitor variables and expressions

Performance Analysis Tools

Performance analysis tools help you assess the performance of your program, identify potential performance problems, and locate the section of the code where the problems occur. The tools can collect clock- and hardware-counter-overflow profile data and trace calls to some library routines. They also display metrics of performance for functions, callers and callees, source lines, and instructions for applications written in C, C++, Java, or combinations of those languages.

- Visualize performance bottlenecks via an execution timeline
- Display performance metrics for Java programs on a per-method basis for methods that are compiled with the Java HotSpot™ virtual machine
- Enable collection of runtime performance statistics
- Graphically display user, system, lock, wait, and page fault times
- Provide memory and cache analysis of references to program data structures
- Generate an optimized linker load map
- Generate annotated source code or disassembly, including compiler commentary for pinpointing performance problems
- Display thread and LWP metrics for multi-threaded programs
- Filter data by samples, threads, LWPs, CPUs, or any combination

Java Technology Support

Sun Studio 10 software provides the following features to support work integrating the Java language with the traditional languages (C and C++):

- The Performance Analyzer, allowing for tuning of Java code
- Basic Java 2 Platform, Standard Edition (J2SE™) technology support, for building and syntax highlighting in text editors (also available via a menu option)

Multithreading Development Tools

Multithreaded Debugging and Analysis

- Browse, select, and view active threads
- Control, evaluate, and modify specific threads
- Monitor thread entry point, current location status, pending event, and lightweight process
- Displays performance data by thread using the new timeline display in the Performance Analyzer

Visual GUI Builder

Thin-Client, Client-Server Connectivity

- Grouping to reference multiple widgets optimally
- Generates toolkit independent callbacks
- Internet Smart Code provides immediate access to preexisting Web pages or CGI programs

C and C++ Code Generation

- Generates highly portable code — quickly
- Supports definition of widgets with additional structure in generated code
- Offers code preludes — user-defined code to be inserted into generated code or an X resource file at specific points
- Stubs file creation for callbacks
- Provides incremental make file generation

Java Programming Language Code Generation

- Supports Java and Swing technology
- Implements Motif widgets in Java technology for easy migration from Motif

Zero to Application in Seconds

- Quickly generates application template with AppGuru feature

Capture for Reengineering

- Breathes new life into old Motif applications
 - Re-creates the interface design of a running Motif application in C++
 - Enables migration of old GUIs to extensible ones

Testing and Problem Re-Creation

- Record and play back Motif GUI applications to:
 - Automate the testing of an application
 - Re-create problems found in an application
 - Develop tutorials or demonstrations

Drawing Features

- Layout editor
 - Drag widgets in place to build your interface
 - Supports easy design layout, including features such as automatic align and distribute with a multilevel undo option
- Font editor
 - Enables user selection of font styles and sizes
 - Bind fonts to objects; easier design revision
 - Supports internationalization
- Advanced color pixmap editor
- Extensible widget palette

Cross-Platform Development

- Creates Motif, Java, or Microsoft Windows GUIs from the same design
 - Compliant with OSF/Motif 1.2.3 and 2.1 specifications
 - Generates Microsoft Foundation Class-ready interfaces and resource files (for Microsoft Windows)
- Develop on the Linux Operating System; deploy on Solaris™, Linux, Java, and Microsoft Windows platforms

Sun™ Studio 10 Software for Linux Platforms

Licensing

- Product entitlement based on serial numbers eases license installation and administration
- Royalty-free runtime library (.so) distribution
- Attractive upgrade pricing available for existing licensed users

Serious Software Made Simple

Sun provides a complete portfolio of affordable, interoperable, and open software systems designed to help you maximize the utilization and efficiency of your IT infrastructure. Built from the secure, highly available foundations of UNIX® and Java, these systems deliver implementations that are preintegrated and backward compatible.

Sun's portfolio consists of Solaris and Linux software for SPARC® and x86 platforms, the N1™ Grid platform for dynamic and utility computing, and the Sun Java System — five integrated software systems for the data center, the desktop, the developer, mobile devices, and identity implementations.

About Sun Microsystems, Inc.

Since its inception in 1982, customers have continually turned to Sun to help them grow their business, lower their costs, and gain competitive advantage. Sun is a leading provider of industrial-strength hardware, software, services, and technologies that make the Net work.

Platforms and Requirements

Operating Systems and Platforms

- Java Desktop System, Release 2
- SUSE LINUX Enterprise Server 8
- Red Hat Enterprise Linux 3
- 500-MHz Pentium III system minimum; AMD Mobile Athlon XP 1800+, AMD Opteron 200 Series, Intel Xeon 2.0 GHz recommended

System Requirements

- Memory: 512 MB of memory minimum; 1 GB recommended
- Disk Space: 500 MB
- CD-ROM for installation
- Minimum 15-inch monitor with 1024x768 resolution

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