DATASHEET

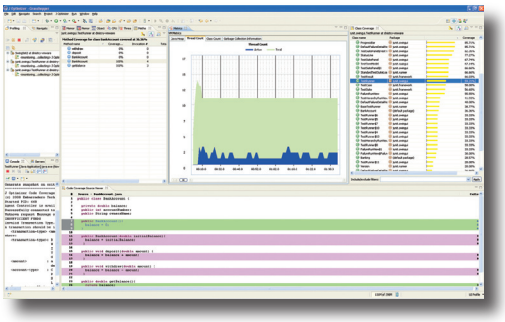
Embarcadero® J Optimizer™

Faster Code, Better Quality, One Tool

embarcadero®

Embarcadero® J Optimizer™ is a comprehensive environment for identifying and resolving performance issues throughout the development life-cycle of Java programs and Java EE applications. By providing Java developers with the ability to profile memory and CPU usage, display real-time threading information, and determine which parts of the code are executed, all down to the line-level detail, J Optimizer enables you to deliver fast, scalable, and reliable applications. J Optimizer also includes the Request Analyzer to track performance bottlenecks at the JDBC, JMS, JNDI, JSP, EJB, CCI, and Web Services level.

- Improve Java application performance with real-time analysis of CPU and memory utilization.
- Improve Java application performance and reliability with real-time detection of thread issues.
- Improve quality of Java applications with identification of code segments that may introduce design concerns, independent of the tool used to write the code.
- Ensure quality and consistency in code development by validation against Java coding standards set across the organization.



Code Coverage shows exact lines of source code that are being executed, in real-time

IMPROVE CODE QUALITY WITH AUDITS AND METRICS

The audits and metrics capabilities in J Optimizer can be used to solve the code quality, code review and code dependency issues typically faced in software development. J Optimizer's audits and metrics are designed to aid developers in finding and fixing problems in their code earlier in the development process. J Optimizer's audits perform a static analysis of your source code, identifying coding problems like potential race conditions, unchecked exceptions and more. Using code audits, developers can also make certain that the code adheres to company standards, guidelines, and specifications. J Optimizer's metrics provide a similar analysis for design problems in your project. Advanced code metrics allow developers to easily determine the quality and complexity of the code structure, helping them pinpoint potential problem areas quickly.

IMPROVE CODE PERFORMANCE WITH MEMORY AND CPU PROFILING

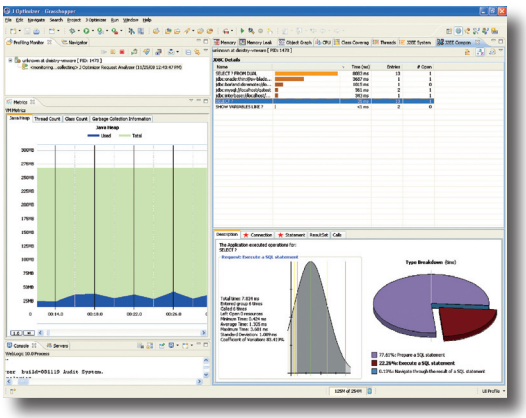
The Profiler in J Optimizer is used to find memory leaks, inefficient temporary-storage issues, CPU bottlenecks, and unit test performance regressions. Use the Profiler to test and improve the performance of Java applications, applets, servlets, JavaBeans, Enterprise JavaBeans (EJBs) and JavaServer Pages (JSPs). The Memory Profiler provides real-time display of all classes used by the test program and of the number of allocated instances. The CPU Profiler displays test results for each thread or thread group for pure CPU use or for elapsed time (pure CPU and inactive phases).

OBTAIN REAL-TIME THREAD INFORMATION WITH THREAD DEBUGGER

The Thread Debugger displays real-time threading information for Java applications, applets, and JavaBean components. Examine how the program uses computer resources, as well as identify thread contentions, thread starvation, excessive locking, and deadlocks. The Thread Debugger provides automatic thread and monitor usage reports that help developers prevent deadlocks and other thread issues before they occur.

ANALYZE PERFORMANCE ACROSS JAVA EE PROTOCOLS WITH REQUEST ANALYZER

The Request Analyzer in J Optimizer enables CPU performance analysis across Java EE protocols. Using the Request Analyzer, developers can obtain precise drill-down information about performance bottlenecks in any one of JDBC, JNDI, CCI, RMI, EJB, JSP, JMS, or WSVC protocols. This capability also provides protocol-specific quality analysis of unclosed resources, exceptions, and other potential issues.



Request Analyzer shows precise drill-down information about performance bottlenecks in Java EE applications

Related Products

Embarcadero® DB Optimizer™

Embarcadero DB Optimizer lets you quickly discover, diagnose, and optimize poor-performing SQL. By discovering data-intensive or frequently executed queries, focusing in on specific SQL statements through query statistics (i.e., CPU, I/O, wait times), and optimizing any problematic statements, DB Optimizer eliminates performance bottlenecks.

JBuilder®

JBuilder offers Java developers a powerful, Eclipse-based IDE which provides support for leading commercial and open source application servers and includes code profiling and performance tuning tools, UML modeling, audits and metrics, visual EJB and Web services designers, a visual Swing designer, and collaborative team development.

Embarcadero® All-Access™

Instant access to the languages, tools, and technologies to design, build, and run your software applications and database systems.

Features	Description
J Optimizer	
Memory and CPU Profiler	Used to find memory leaks, inefficient temporary-storage issues, CPU bottlenecks, and unit test performance regressions. Use the Profiler to test and improve the performance of Java applications, applets, servlets, JavaBeans, Enterprise JavaBeans (EJBs) and JavaServer Pages (JSPs). The Memory Profiler provides real-time display of all classes used by the test program and the number of allocated instances. The CPU Profiler displays test results for each thread or thread group for pure CPU use or for elapsed time (pure CPU and inactive phases).
Thread Debugger	Provides a real-time display of the progress of all threads running within the Java Virtual Machine (JVM), the ability to monitor wait-states and locks, and even predict potential deadlock conditions in the code.
Request Analyzer	Profiles the performance behavior of Java EE application code across common Java EE components such as JDBC, RMI, JSP, JNDI, Enterprise JavaBeans (EJBs), JMS, and Web service protocol containers.
Code Coverage	Code Coverage allows you to determine the exact lines of source code that are being executed. In real time, you can view how frequently each class, method, and line of code is executed. Code Coverage lets you test applications, applets, servlets, JavaBeans, Enterprise JavaBeans (EJBs), JavaServer Pages (JSPs), and virtually any other Java code. With Code Coverage, you can easily spot and remove dead code from applications, improving quality and reducing the footprint of an application.
J Optimizer Agent	The J Optimizer Agent is a profiling agent that works with either of two standard profiling interfaces that a JVM might support: Java Virtual Machine Profiler Interface (JVMPI) or Java Virtual Machine Tool Interface (JVMTI).
Code Audits and Metrics	The audits and metrics capabilities in J Optimizer can be used to solve the code quality, code review and code dependency issues typically faced in software development. J Optimizer's audits and metrics are designed to aid developers in finding and fixing problems in their code earlier in the development process. J Optimizer's audits perform a static analysis of your source code, identifying coding problems like potential race conditions, unchecked exceptions and more. J Optimizer's metrics provide a similar analysis for design problems in your project.
Progress Tracker	Enables developers to continuously monitor and measure the impact of performance changes by allowing them to compare visual snapshots of their progress. It allows for analyzing snapshots so users can compare profiler, code coverage, and request analyzer snapshots. It also generates reports that can be exported in PDF and HTML format.
Snapshots	Snapshots are binary files that capture all the data from a particular test run. Snapshots can be opened for analysis in the product that generated it, such as Profiler, Code Coverage, or Request Analyzer.
Multi-Platform Support	J Optimizer supports profiling of Java applications running on today's most popular commercial and open source application servers including BEA WebLogic Application Server, IBM WebSphere, JBoss, Oracle Application Server, Apache Geronimo, Apache Tomcat, and Sun GlassFish.

System Requirements

- 768 MB RAM minimum, 1 GB RAM recommended for standalone configuration
- Agent only – 512 MB RAM
- Hard Disk Space (Full Product)
  - 500 MB on Windows
  - 550 MB on Linux
  - 350 MB on Mac
- Hard Disk Space (Agent Only)
  - 150 MB on Windows
  - 200 MB on Linux
  - 30 MB on Mac
  - 150 MB on Solaris
- Intel Pentium 4, 2.4 MHz or higher (or compatible)
- DVD-ROM drive (to install product from DVD)
- High-resolution monitor (1024x768)

Operating Systems:

- Microsoft Windows XP SP3, Microsoft Windows Vista Update 1, Mac OS X (10.5), Red Hat Enterprise Linux 5
- Solaris 10 for J Optimizer Agent only