IBM

Rational® software

IBM Rational PurifyPlus

Highlights

■ *Pinpoints hard-to-find bugs*

■ *Highlights performance bottlenecks*

■ *Identifies untested code*

■ *Instruments an entire application or only selected modules*

■ *Is integrated directly as part of Microsoft Visual Studio .NET*

■ *Supports Java, all managed Visual Studio .NET languages, Visual C/C++, Visual Basic and ANSI C/C++*

■ *Supports Microsoft Windows, UNIX and Linux environments*

■ *Works with or without source code*

IBM Rational® PurifyPlus™ software is a complete set of run-time analysis tools designed for improving application reliability and performance. The PurifyPlus software combines memory error and memory leak detection, application performance profiling, and code coverage analysis into a single, complete package. Together, these functions help developers ensure the highest reliability and performance of their software from its very first release. (Developers also have the option of using IBM Rational Purify® software, which can be purchased separately, for a dedicated memory error and memory leak detection tool set. But the PurifyPlus solution adds performance profiling and code coverage analysis capabilities.)
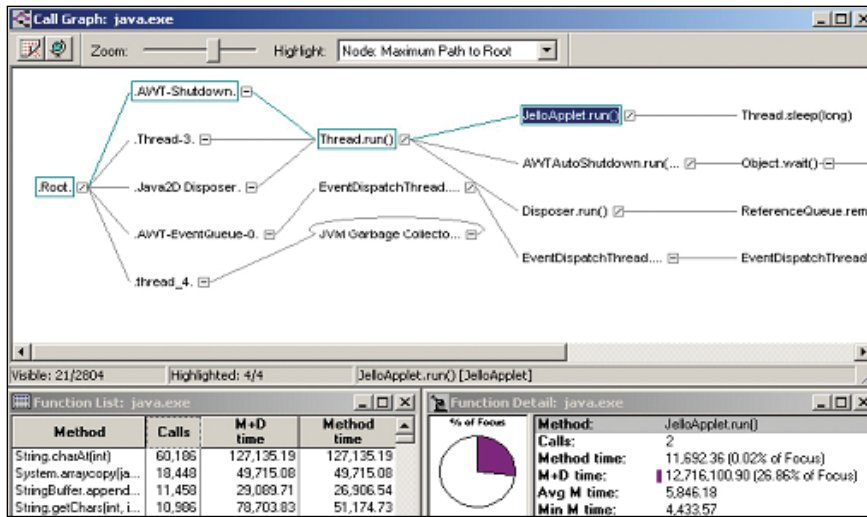
Do more in your IDE
With the PurifyPlus software, a developer using Microsoft® Visual Studio .NET software can do more in an integrated development environment (IDE). The PurifyPlus software has its own menu and analysis results that appear in the IDE user interface.

This allows you to easily analyze your code as it is being created— no more switching back and forth between different tools. Because it has its own stand-alone user interface, the PurifyPlus software also supports developers using other IDEs.

Develop high-quality code faster
PurifyPlus software allows you to instrument your entire application or select only portions of it. Selective instrumentation analyzes only the modules that you want considered. This provides greater flexibility for creating the test environment and makes the data collection part of run-time analysis much easier and more productive.

Many developers value run-time analysis but are concerned that the effort will slow down their development. The PurifyPlus solution doesn't get in your way. Special instrumentation technology allows you to analyze your executables directly—no recompilation is necessary. And PurifyPlus software does this for all of the major programming languages, eliminating the need to use multiple tools from different vendors (see the product feature matrix).

The PurifyPlus object reference graph shows the objects that reference, and are referenced by, the current object.

IBM Rational software provides run-time analysis supporting the widest range of development platforms and languages. The PurifyPlus software is your single solution for developing high-quality code, faster.

Make developing on a team easier
PurifyPlus software integrates with IBM Rational ClearQuest® software so that you can instantly create defect reports upon finding bugs in your code. These products are conveniently packaged with IBM Rational Suite® software, giving you a single, integrated solution for all your team development needs.

And so you'll never have to go it alone, the IBM developerWorks® service acts as your online extended development community. The developerWorks service provides white papers, discussion forums and a wealth of other technical resources made accessible through a special online customer Web site. It also provides convenient Web-based training so that you need not leave your work environment. With the developerWorks service, you'll never have to start a project from a blank slate.

Only IBM Rational software combines run-time analysis tools with integrated lifecycle support and an extended developer community. Rational software makes working on a development team easier, helping you develop fast, reliable code.

To learn more
For more information on IBM Rational PurifyPlus software, visit:

ibm.com/software/awdtools/purifyplus

Product feature matrix

Feature	PurifyPlus Enterprise Edition[1]	PurifyPlus for Windows®	PurifyPlus for Linux® and UNIX®	Purify for Windows	Purify for Linux and UNIX
Memory corruption detection	C/C++	C/C++	C/C++	C/C++	C/C++
Memory leak detection	C/C++, Java™, managed Microsoft Visual Studio .NET (MSVS .NET)	C/C++, Java, managed MSVS .NET	C/C++, Java[2]	C/C++, Java, managed MSVS .NET	C/C++
Performance profiling	C/C++, Java, managed MSVS .NET, Microsoft Visual Basic 6 (MSVB6)	C/C++, Java, managed MSVS .NET, MSVB6	C/C++, Java[2]	N/A	N/A
Code coverage analysis	C/C++, Java, managed MSVS .NET, MSVB6	C/C++, Java, managed MSVS .NET, MSVB6	C/C++, Java[2]	N/A	N/A

1 *PurifyPlus Enterprise Edition software is a bundling of PurifyPlus for Windows and PurifyPlus for Linux and UNIX software.*
2 *Java support is available for the Sun Microsystems Solaris operating environment only.*

IBM Rational PurifyPlus features and benefits

Feature	Description	Benefit
Memory corruption and memory leak detection	Automatically pinpoints hard-to-find bugs	Improve application reliability Save time debugging
Application performance profiling	Highlights application performance bottlenecks	Improve application performance Identify the most important code to optimize
Code coverage analysis	Identifies untested code	Avoid users being the first to exercise functionality
Unique instrumentation techniques	Instruments code at the byte or object level	Eliminate the need for recompilation to analyze your code Analyze every component, even those without source code
Server-side Java support	Works with your Web or application server to analyze JavaServer Pages (JSP), servlet, Enterprise Java Beans (EJB) and Java 2 Platform, Enterprise Edition (J2EE) code	Improve reliability and performance of server code and client applications
Runs directly inside MSVS .NET or as a stand-alone tool	Installs and operates directly within MSVS .NET	Eliminate switching back and forth between different tools with different user interfaces Provide a more cohesive, more productive development experience Test and analyze your code as it is being created Extend your development experience to include run-time analysis Gain flexibility in performing run-time analysis because of stand-alone operation
Comprehensive programming language support	Supports C/C++, Java, managed .NET languages (including MSVB .NET and C#), and MSVB6	Get everything you need in one run-time analysis tool for all your application development
Selective instrumentation	Allows you select which modules of an application to analyze	Test only the modules you want without having to instrument the whole application Choose only the components for which you are responsible Create the test environment with greater flexibility Simplify the data collection part of run-time analysis

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IBM Rational PurifyPlus system requirements

Operating system	Software
Microsoft Windows 32-bit x86 platforms	**Languages and compilers**
• Windows 2000 • Windows XP • Windows 2003 Server	• Microsoft Visual C++ 6.0 and Visual Basic 6.0 with Visual Studio 6.0 service pack 4, 5 or 6 • Microsoft Visual C++ 6.0 processor pack • Microsoft Visual C++ (unmanaged), C++ .NET, ASP .NET, Visual Basic .NET, C#, J# with Visual Studio .NET 2002, 2003 or 2005 • Java with IBM or Sun JVM 1.4.2 or 5.0
Sun Solaris SPARC platforms	**Languages and compilers**
• Solaris 8 • Solaris 9 • Solaris 10	• C/C++ with Sun ONE Studio 7 (V5.4), Studio 8 (V5.5), Studio 9 (V5.6), Studio 10 (V5.7) or Studio 11 • C/C++ with gcc/g++ 2.95.x, 3.0.x, 3.1, 3.2, 3.3, 3.4 or 3.4.3 • Java with IBM or Sun JVM 1.4.0 or 1.4.1 (32-bit and 64-bit support for memory error and leak detection and performance profiling; 32-bit support for code coverage)
HP-UX PA-RISC platforms	**Languages and compilers**
• HP-UX 11.0 • HP-UX 11i (11.11) • HP-UX 11i v2 (11.23)	• C/C++ with HP aCC 3.31, 3.33, 3.34, 3.37, 3.39, 3.45, 3.50, 3.52, 3.55, 3.56, 3.60, 3.63 or 3.65 (32-bit and 64-bit) • C/C++ with gcc/g++ 2.95.x, 3.0.x, 3.1, 3.2, 3.3 or 3.4 (32-bit only)
IBM AIX® platforms	**Languages and compilers**
• AIX 5L™ V5.1 • AIX 5L V5.2 • AIX 5L V5.3	• C/C++ with IBM Visual Age C++ 6.0 and XL C/C++ 7.0 or 8.0
Linux x86/x64 platforms	**Languages and compilers**
• Red Hat Enterprise Linux AS/ES/WS 3 U5, U6 (32-bit only) • Red Hat Enterprise Linux AS/ES/WS 4 (including U1 and U2) • SUSE Linux Enterprise Server 9.0, including SP1	• C/C++ with gcc/g++ 2.96-112, 2.96-113, 3.2-7, 3.2-34, 3.2.2, 3.2.3, 3.3.1, 3.3.2, 3.3.3, 3.4, 3.4.3, 3.4.4, 4.0.0 or 4.0.1 (32-bit and 64-bit support on RHEL4 and SLES9 for AMD Opteron and Intel®, x86 EM64T; 32-bit support on RHEL3)

Note: IBM Rational PurifyPlus software is regularly updated to support new development environments. This table reflects support in the 7.0.0.0 release. Check the IBM Rational support Web site for product updates and release notes with more details.