



IBM Rational Software Analyzer

Highlights

- ***Helps identify code-level issues early in the software development lifecycle, potentially saving time and money***
- ***Enables simplified management of other analysis tools through an extensible framework***
- ***Automates code quality analysis as part of the build process through integration with IBM Rational Build Forge software for a centralized software code scan solution***
- ***Supports the efforts of compliance managers with the enforcement of corporate IT governance and compliance mandates through centralized reporting features***
- ***Enables rapid startup and time to value through easy integration with existing Eclipse environments***

Identifying code-level issues early in the software development lifecycle

One of the unfortunate truths of software development is that no matter how good the developers are, there are always going to be bugs. Although this issue persists across virtually all companies, you can gain a competitive edge by identifying these bugs early in the development process. Finding bugs at the precompile or prebuild stage is ideal so that you can fix the problems without having a significant impact on the development cycle. However, finding a bug after your product has been released to market can be disastrous, resulting in expensive and time-consuming troubleshooting, less time to focus on new product development and even a loss of customer confidence.

The IBM Rational® Software Analyzer application features a rich set of analysis rules that can help improve your competitive edge by enabling you to identify code-level issues early in the software development lifecycle.

A rich set of programming rules—including more than 550 Java™ rules, more than 130 C/C++ rules and more than 40 Java software metrics rules—enables your developers to review your code using development best practices. This approach can result in increased style consistency, fewer errors and better application performance. Using Rational Software Analyzer is almost like having a master programmer review the code developed by practically every member of your team—except it accomplishes this review in a fraction of the time. Much like the grammar-checking feature in your word-processing application, the analysis capabilities in Rational Software Analyzer can offer quick fixes for some types of bugs, enabling you to easily select an automatic fix. While Rational Software Analyzer can provide value to virtually all companies that develop software, it is particularly valuable in industries where the risk of software failure can be disastrous and the cost of fixing software defects and application rework is high, such as transportation, aerospace and defense, and medical equipment.

Available in a single-use developer edition and a centrally managed enterprise edition with integration to IBM Rational Build Forge® software, the Rational Software Analyzer application provides the packaging flexibility to meet the software lifecycle management needs of your organization.

Simplifying management of other analysis tools

Your development team has enough to do without worrying about which static analysis tool to run and when. Rational Software Analyzer enables your developers to execute multiple scan rules and tools from a common framework, helping to increase productivity while enabling better utilization and central management of legacy and third-party technologies. This common framework results in a customizable and consistent workflow, helping to simplify static analysis utilization and support a wide and extensible enterprise-class approach. Rational Software Analyzer also enables your developers to modify existing rules and even create new rules through a flexible rule structure. So you can use Rational Software Analyzer to build a collaborative enterprise development environment tailored to your company's software development best practices.

Automating code quality analysis

For organizations that need to automate code scans, the IBM Rational Software Analyzer Enterprise Edition application integrates with Rational Build Forge software, providing a centralized software code scan solution that automates code quality analysis as part of the build process. These automated code scans provide an extra layer of protection by enforcing utilization of static analysis, helping to reduce the risk that developers will check in code to a software configuration management (SCM) repository without first analyzing it. In development environments where it doesn't make sense to have individual developers regularly analyzing their own code, Rational Software Analyzer Enterprise Edition enables you to run remote scans from within the Rational Build Forge environment, extending the benefits of the Rational Software Analyzer application and virtually eliminating the need to install local versions of the IBM Rational Software Analyzer Developer Edition application.

Enhancing visibility, governance and compliance management

Given the increasing requirements for corporate governance and compliance, software development tools need to extend beyond basic functionality to provide a centralized view of standards compliance. Rational Software Analyzer Enterprise Edition software has powerful reporting features that facilitate better project visibility through a rich set of out-of-the-box reports and metrics. You can view these reports in HTML and Adobe® PDF formats or leverage custom data export formats to suit your organization's requirements. While centralized views are supported in the enterprise edition, individual reports are available in the developer edition.

The automated code reviews in Rational Software Analyzer Enterprise Edition are not dependent on an individual or a location, which helps enable you to adhere to and comply with key IT, engineering and design standards. In addition, you can customize the rule configurations to help you verify that your programming guidelines align with your corporate governance requirements. To aid in potential audits, Rational Software Analyzer Enterprise Edition enables you to access analysis results directly from the Rational Build Forge log files.

Fast startup and time to value

Any technology introduced into the development process only provides value after it has been successfully implemented, so Rational Software Analyzer has been designed to enable fast startup and quick time to value. The built-in installation manager helps simplify installation, and integration with existing Eclipse environments helps reduce staff training needs, speed utilization and clear desktop application clutter.

The Rational Software Analyzer application supports the Microsoft® Windows® and Linux® operating systems. For increased ease of usage, Rational Software Analyzer has been translated into multiple common languages.

For more information

To learn more about how IBM Rational Software Analyzer software can help you identify and rectify code bugs early in the development lifecycle, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/software/awdtools/swanalyzer

IBM Rational Software Analyzer edition comparison

Feature	IBM Rational Software Analyzer Developer Edition	IBM Rational Software Analyzer Enterprise Edition
More than 550 Java rules covering code review, architectural discovery and deep analysis	■	■
More than 130 C/C++ code review rules	■	■
More than 40 Java software metrics rules	■	■
Integration with Eclipse	■	■
Translated to multiple languages	■	■
Installation manager functionality	■	■
Extensible framework that enables utilization and centralized management of legacy and third-party technologies via the Rational Software Analyzer application programming interface (API)	■	■
Individual reports in HTML and PDF, or customizable data export formats	■	
Centralized report views in HTML and PDF, or customizable data export formats		■
Ships with Rational Build Forge adapter		■
Centralizes and automates reporting and code scanning		■
Command-line interface (CLI) support		■



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