

DATA SHEET

DevPartner® Studio Professional Edition

Business Challenge

Every developer looks to build well-tested applications and components quickly with as few coding errors and performance problems as possible. However, in today's environment, applications combine a wide range of technologies that are prone to performance and scalability problems and many contain some form of memory and resource leaks, runtime errors or security vulnerabilities. These can be very difficult, and in many cases, virtually impossible to detect, leading to applications being deployed with hidden or unresolved issues that may lead to catastrophic results once in production.

Product Overview

DevPartner Studio enhances Microsoft Visual Studio and Microsoft Visual Studio Team System Editions with an award winning suite of code quality features that increase development productivity. DevPartner Studio automatically detects and diagnoses software defects, performance problems and security vulnerabilities early in the development process - when problem resolution is most cost-effective. With expert advice, coding standards and best practices built in, DevPartner Studio Professional Edition enables Windows application teams to improve software quality, maximize developer productivity and deliver superior software reliability, performance and security.

Key Benefits

Micro Focus DevPartner® Studio Professional Edition is an award-winning suite of software development and testing tools that:

- Enables Windows application teams to build reliable, high-performance applications, components and web services for Microsoft .NET and native Windows platforms
- Automatically detects and diagnoses software defects and performance problems early in the development process as cost-effectively as possible, providing built-in expert coding advice, coding standards and best practices to improve development skills and ensure software reliability and performance
- Enhance Visual Studio and Visual Studio Team System Editions with advanced capabilities that allow development organizations to improve software quality, adopt coding standards and best practices, and maximize developer productivity.

Detailed Feature Overview

Review source code, detect errors

DevPartner Studio assists development teams by automating the code review process. The code review function quickly examines source code from a variety of languages, including Visual Basic .NET, C# and ASP.NET, checking each source line against a detailed base of coding standards and best practices. Development teams select the predefined code review rules that apply to their processes, or define their own standards and practices by creating new rules.

Code complexity is an early indicator of potential quality problems so understanding which parts of an application are most complex can facilitate better testing. DevPartner Studio code review automatically calculates the code complexity and applies a "bad-fix" probability for each method in a .NET application. These metrics provide priority and guidance to help focus test suite development on code that has the highest potential to contain undiscovered defects.

Identify and resolve security vulnerabilities

DevPartner Studio scans ASP.NET application source code to find security problems before they become deeply embedded in the code base. By scanning application source code at compile time, DevPartner can pinpoint unsecure coding practices to the exact method and line of code. Security scanning checks each line of ASP.NET code for nearly 200 security vulnerabilities and suspicious behaviors such as incorrect use of cryptography APIs, unsecure use of .NET code attributes and permissions, and unsecure use of COM and P/Invoke.

Locate errors and memory leaks automatically, correct problems quickly

DevPartner Studio error detection monitors a running application to detect problems in native C/C++ code and provides guidance on correcting these problems. Using DevPartner Studio error detection with BoundsChecker technology, developers can locate a large variety of C/C++ problems such as memory leaks, interface and resource leaks, pointer errors, uninitialized memory and overruns. Developers can also validate Windows APIs and system calls to avoid known problems and help diagnose runtime errors. DevPartner Studio error detection also monitors native application calls that cross the managed boundary into .NET code. It provides valuable information on the frequency of crossed boundaries to help developers determine when native code should be migrated to .NET code, as well as when errors from native code cause problems in managed code.

Locate performance problems

Because distributed and web-enabled applications have many

moving parts, finding the cause of performance bottlenecks in a distributed environment can be a daunting task. DevPartner Studio performance analysis helps developers quickly isolate performance bottlenecks in single- and multi-tiered applications down to the problematic component, method, or line of code. Combined with an intuitive user interface, DevPartner Studio performance analysis lets developers trace application operations and differentiate between application and operating system calls for rapid identification of performance issues.

Analyze .NET applications with a performance expert

The DevPartner Studio performance expert feature expands application performance analysis into new dimensions to measure and optimize the total performance of .NET applications. By measuring network I/O, file and disk I/O and other thread wait times, this feature provides a deeper understanding of how application wait times affect overall performance and end user experience.

Developers can integrate performance expert into their manual or automated testing routines to identify potential performance issues during daily coding and debugging cycles. Developers and testers can review the performance expert session file after each new build to determine if the previous coding cycle has introduced any new performance issues. When coding is completed, the final performance expert session file and performance report can be used to document that the project's performance goals have been met.

Optimize .NET memory utilization

DevPartner Studio memory analysis graphically displays the amount of memory used at runtime and identifies the entry points, methods and lines of code that allocate memory, allowing developers to quickly locate inefficient code. It provides developers with detailed information to help determine where managed memory usage issues exist. Real-time graphs provide a live, dynamic view of the application's memory use, which objects and how many are currently allocated and how much memory is used by each of these objects. This provides developers with an overall look at how memory is managed during program execution. With an automatically generated and accurate profile of memory usage, developers can save time improving runtime performance and memory utilization.

Deploy thoroughly tested applications

DevPartner Studio coverage analysis automatically pinpoints untested code by capturing and combining testing sessions for applications and components across users, languages and application tiers. It identifies which portions of the code are tested redundantly and which portions are not tested well enough or at all. With DevPartner Studio, testing teams focus their activities where they are most needed to improve in order to ensure application quality

Track code quality with integrated reporting

DevPartner Studio integrated reporting produces code quality reports that managers and team leads can review easily using a web browser. Important metrics and summary-level details allow managers to quickly understand the quality and stability of the code base from the earliest stages of development through the final QA testing phase. Customizable reports are provided for a range of reporting needs, including code quality, code review, error detection, performance and code coverage.

Diagnose system configuration issues with ease

DevPartner Studio system comparison helps developers understand the differences in configuration and system level settings that affect the stability of their applications. Through the use of system snapshots, the system comparison feature can compare the configuration of two systems, or show configuration changes that have occurred on a single system over a period of time. DevPartner Studio also includes a snapshot Software Development Kit (SDK) that allows the system snapshot capability to be customized and embedded into production-level applications. This allows developers using DevPartner to extend the reach of their troubleshooting expertise beyond the development lab.

Analyze distributed applications

To assist in improving the reliability and performance of distributed applications, DevPartner Studio analyzes distributed application data across multiple tiers, providing developers with a single correlated view. Adding an optional DevPartner Studio Server license to a remote machine lets developers collect and analyze data from components running remotely. This allows IT teams to accurately simulate a distributed production environment during the development and testing process.

Work seamlessly and productively with Visual Studio Team System

DevPartner Studio extends the capability and value of Visual Studio Team System with the most advanced diagnostics, distributed analysis capabilities and work item integration with Team Foundation Server. Work item integration allows DevPartner Studio users to collaborate more effectively. Testers and developers can communicate detailed diagnostic data with one another in a Team System environment. Better collaboration and timely data result in faster resolution of defects to keep application development projects on schedule.

Product Specifications and System Requirements

See: <http://www.microfocus.com/products/DevPartner/SystemRequirementsDevPartnerStudioProfessionalEdition9.asp>

For additional information please visit: www.microfocus.com

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