


## DATA SHEET

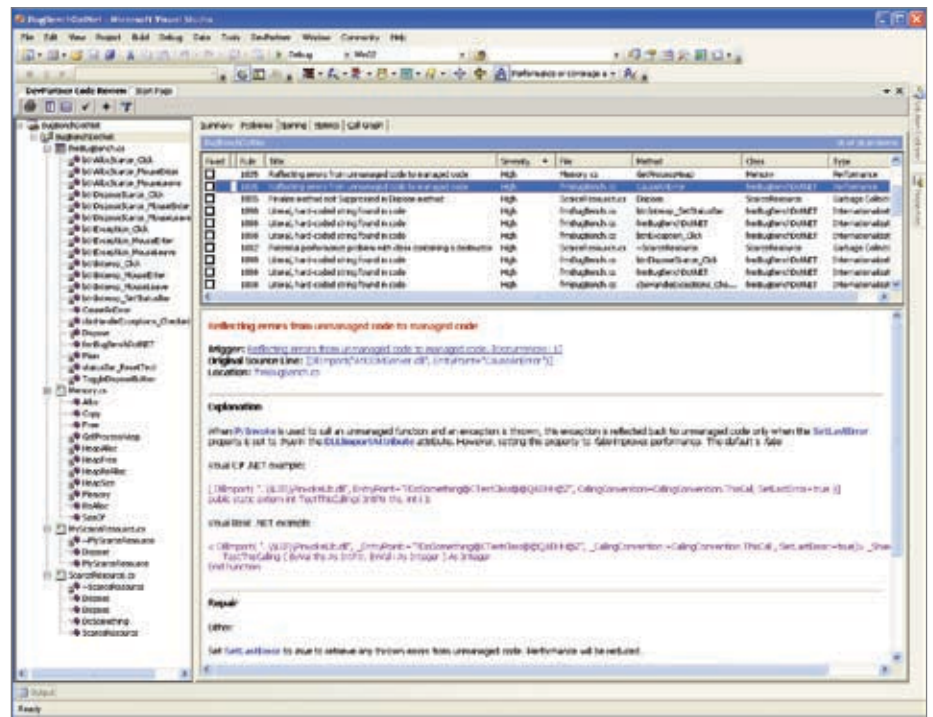


### DEVPARTNER STUDIO PROFESSIONAL EDITION

Build Microsoft applications with confidence.

DevPartner Studio enhances Microsoft Visual Studio and Visual Studio Team System 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.





## Review source code, detect errors

Commonly accepted software development practices typically include peer reviews of the source code under development. The downside is manual code reviews tend to be time-consuming, if carried out at all, leaving development teams less time to focus on other projects and requirements.

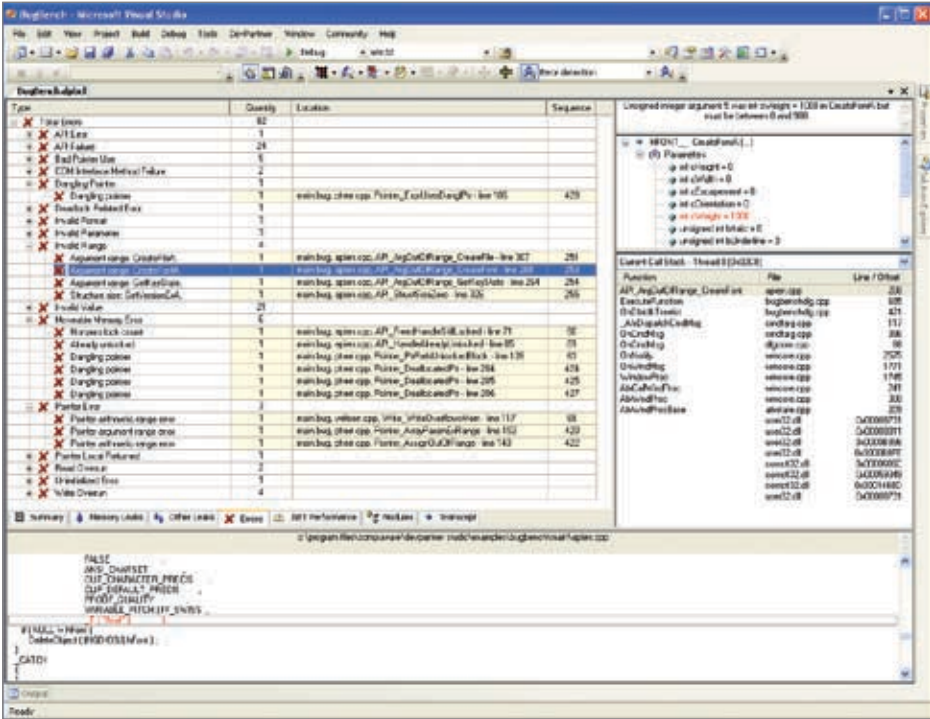
DevPartner Studio assists development teams by automating the code review process. The code review function quickly examines source code from a variety of languages, including Visual Basic .NET, C# and ASP.NET, checking each source line against a detailed base of coding standards and best practices.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

*DevPartner Studio code review provides a list of potential errors and inconsistencies, and expert advice on how to fix them. Security scanning checks each line of ASP.NET code for more than 200 security vulnerabilities.*

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 "bad-fix" probability of 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

With attacks on web applications increasing in scope and size, the need for application security has never been



*DevPartner Studio error detection capabilities automatically locate and diagnose errors in running code. Developers can view the code's call stack and instantly go to the line of code generating the error.*

greater. 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 insecure coding practices to the exact method and line of code. Security scanning checks each line of ASP.NET code for more than 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.

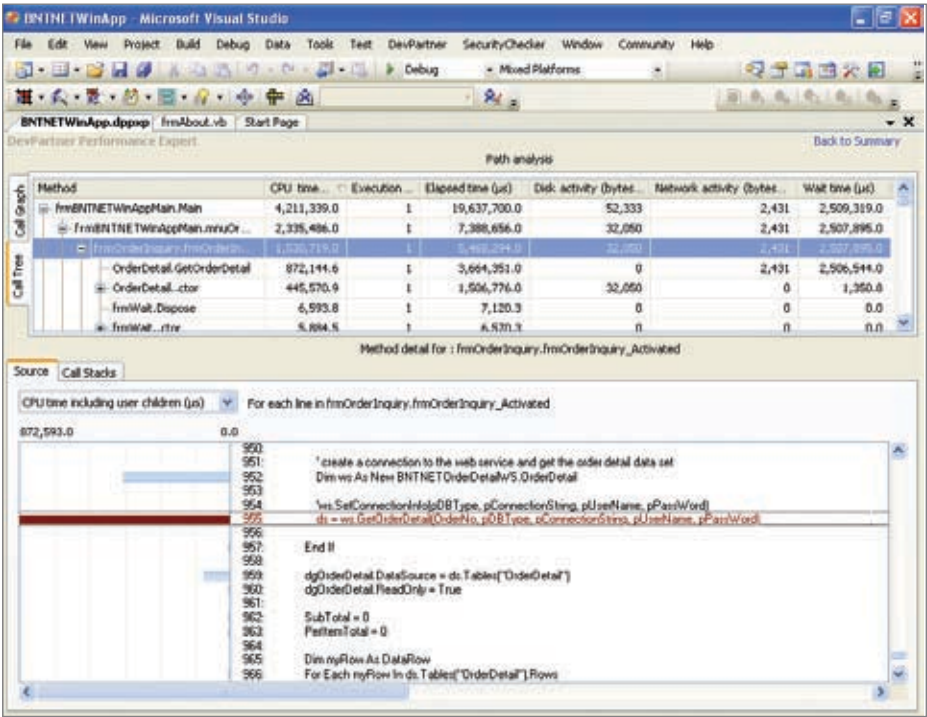
DevPartner code review and security scanning can be performed on demand from within the Visual Studio-integrated user interface. Automated code review and security scanning can also be added to

continuous integration environments using the DevPartner command-line interface.

**Locate errors automatically, correct problems quickly**

Native Windows applications written in C/C++ often contain memory and resource leaks, pointer errors, array overruns and API failures. These types of errors are difficult to locate and may lead to deploying applications with hidden and unresolved errors.

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.



The DevPartner Studio performance expert feature shows the impact of CPU utilization, file and disk I/O, network I/O and thread wait time.

## Locate performance problems

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.

Dual-core and hyper-threaded systems are excellent for accelerating multi-threaded Windows applications, but often result in thread deadlock problems that do not occur on development systems. Finding the cause of multi-threading deadlocks in dual-core and hyper-threaded systems can be extremely difficult without the right tools. DevPartner Studio error detection includes powerful thread analysis features that monitor the execution of native Windows applications to predict and detect thread deadlock conditions.

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. 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.

Its dynamic call graph with detailed performance data helps developers quickly navigate through the components of an application. They can compare data collected from multiple performance runs to determine if code changes have resulted in improved performance.

.NET FEATURES (MANAGED)	NATIVE FEATURES (UNMANAGED)
<ul style="list-style-type: none"><li>• Source code analysis</li><li>• Security scanning</li><li>• Coding standards and best practices enforcement</li><li>• Code complexity analysis</li><li>• Memory analysis</li><li>• Code performance analysis</li><li>• Network I/O performance analysis</li><li>• File and disk I/O performance analysis</li><li>• Code coverage analysis</li><li>• Code quality reporting</li><li>• System comparison</li><li>• Distributed application support</li><li>• Work item integration with Microsoft Team Foundation Server</li></ul>	<ul style="list-style-type: none"><li>• Runtime error detection</li><li>• Memory and resource leak detection</li><li>• Memory tracking and error detection</li><li>• Windows API validation</li><li>• Deadlock detection and prediction</li><li>• Native/.NET interoperability analysis</li><li>• Code coverage analysis</li><li>• Code performance analysis</li><li>• Code quality reporting</li><li>• Distributed application support</li><li>• System comparison</li><li>• Work item integration with Microsoft Team Foundation Server</li></ul>

*DevPartner Studio enhances Visual Studio and Visual Studio Team System with advanced analysis, diagnostics and reporting capabilities.*

Analyze .NET applications with a performance expert

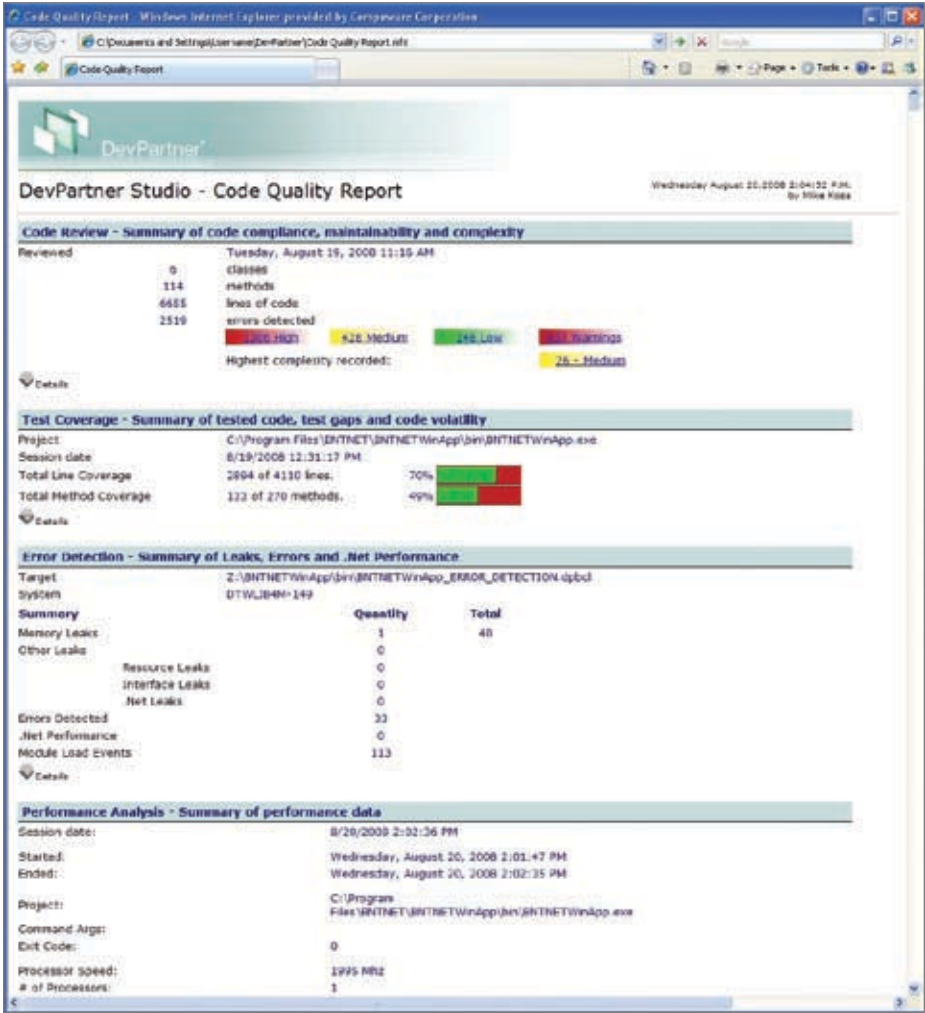
Traditional profilers are effective for measuring and optimizing code based on CPU execution cycles. However, with today’s web and distributed .NET applications, developers are faced with performance issues caused by external factors that are not CPU-centric.

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 resource utilization

Inefficient use of memory resources in a .NET application can lead to serious problems with scalability and performance. DevPartner Studio memory



DevPartner Studio integrated reporting produces code quality reports that managers and team leads can review easily using a web browser.

analysis graphically displays the amount of memory used at runtime and identifies the lines of code that allocate memory, allowing developers to quickly locate inefficient code.

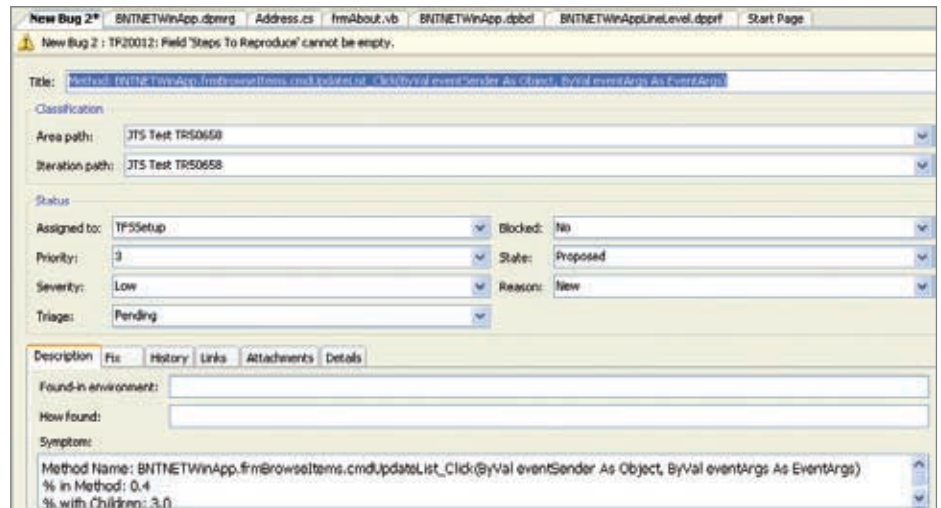
DevPartner Studio memory analysis provides developers with detailed information to help determine where managed memory usage issues exist. Real-time graphs provide a live, dynamic view of the application's memory use, which objects are allocated to the code and how much memory is used by each object. 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 resource utilization.

Deploy thoroughly tested applications

How much of the code has been tested? Which lines of code have not been tested? How stable is the code base? Insufficient answers to these questions lead to uncertainty at milestones such as code





*DevPartner Studio integrates seamlessly with Visual Studio Team System to improve communication and collaboration among testers and developers. Work items are automatically populated by DevPartner Studio with a description of each software defect plus detailed diagnostic information.*

check-in, unit or integration testing, and final release.

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 enough or at all. With DevPartner Studio, testing teams focus their activities where they are most needed to improve their efficiency significantly.

## Track code quality with integrated reporting

What is the quality of last night's build? How much of the code base changed since the previous build? How much of the build contains untested code? How many errors and resource leaks are still in the code? Development and QA managers ask these questions every day but, until now, meaningful answers were difficult to produce.

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

The difficulty in trying to reproduce application problems in the development lab inherently causes system configuration differences and changes in system-level settings. Developers often find themselves asking questions such as: Why does an application fail on one system, but not on another? Why has a normally stable application become unstable over time?

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.

### Skilled support and mentoring

Micro Focus's Solutions Delivery Group provides skilled technical experts and a process to mentor users in effective application debugging, tuning and testing, enabling them to be more successful in a shorter period of time. Implementation Assurance helps companies quickly realize the value of the DevPartner family of application development tools. This service verifies the installation of the tools and transfers basic product knowledge to a core group of your DevPartner users.

To learn more about Micro Focus DevPartner Studio Professional Edition, visit:  
[www.microfocus.com](http://www.microfocus.com)



### About Micro Focus

Micro Focus, a member of the FTSE 250, provides innovative software that allows companies to dramatically improve the business value of their enterprise applications. Micro Focus Enterprise Application Modernization and Management software enables customers' business applications to respond rapidly to market changes and embrace modern architectures with reduced cost and risk.

For additional information please visit:  
[www.microfocus.com](http://www.microfocus.com)

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