# DevPartner Studio Professional Edition

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 as well as containing memory and resource leaks, runtime errors or security vulnerabilities. These can be very difficult, and in many cases, virtually impossible to detect manually, leading to applications being deployed with hidden or unresolved issues that may become catastrophic once in production.

## Product Overview

Micro Focus® DevPartner Studio enhances Microsoft Visual Studio Professional, Premium, and Ultimate 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 Features

■ **Preview 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.

■ **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.

## Key Benefits

- 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. It provides built-in expert coding advice, coding standards and best practices to improve development skills and ensure software reliability and performance.

## System Requirements

**Operating Systems**
Microsoft Windows Versions
- Windows 10 (Fall 2017) Creators Update
- Windows 10
- Windows 7, base, SP1
- Server 2008 R2, base, SP1
- Windows Vista SP2
- Server 2008 SP2
- Windows XP Professional SP3
- Server 2003 R2 SP2
- Windows 8.0, 8.1
- Server 2012 R2, base

■ **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 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, and between CPU-bound algorithms and input/output-bound waits, for rapid identification of performance issues.

■ **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.

■ **Penetrate large applications**—64-bit process support gives DevPartner Studio capabilities to identify bugs within very large applications, removing the 2GB address ceiling. BoundsChecker works inside native or .NET hosted 64-bit applications to provide the same memory, resource, and API misuse detail as in x86 processes. Performance, memory, and coverage profilers likewise provide scalability in tackling large memory footprint applications. The only limits are the physical limits of memory and swap space on the target system.

## System Requirements continued

**Operating Systems** continued
Hardware
- Intel x86
- Intel x64
- AMD 64

**Microsoft Compiler Support**
Data Collection Type
*C/C++ (unmanaged code) data collection*
- Intel x86: 32
- Intel x64: 32 and 64
- AMD 64: 32 and 64

Process Bitness
*.NET (managed code) data collection*
- Intel x86: 32
- Intel x64: 32 and 64
- AMD 64: 32 and 64

Visual Studio Compilers and Runtime Environments
- Visual Studio 2017—update 15.4
- Visual Studio 2015 base—update 3
- Visual Studio 2013 base—update 4
- Visual Studio 2012 base—update 4
- Visual Studio 2008 SP1
- Visual Studio 2005 SP1
- .NET versions 2.0, 3.0, 3.5, 4.0, 4.5, 4.6 and 4.7 used with:
  - Visual Studio 2017
  - Visual Studio 2015 base—update 3
  - Visual Studio 2013 base—update 4
  - Visual Studio 2012 base—update 4
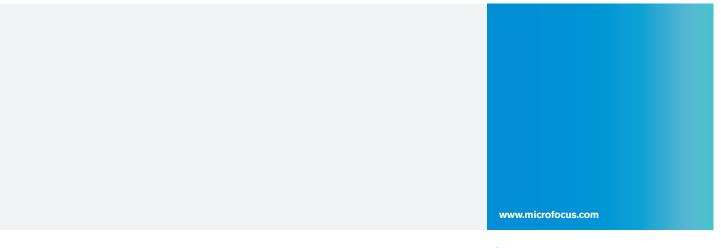
**Related Suite Offerings**
- DevPartner Studio Professional: All native and .NET tools
- DevPartner Visual C++ Edition: Native C/C++ tools
- BoundsChecker: Native error detection only

■ **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 enable 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 cater for a range of reporting

needs, including code quality, code review, error detection, performance and code coverage.

- **Easily diagnose system configuration issues**—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 enables 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.Source code peer reviews are a valuable mechanism for finding errors and ensuring compliance with coding standards and best practices. DevPartner's code validation feature automates the code review process to raise code quality and save valuable development time. The automated code review process scans application source code to detect coding errors and ensure compliance with coding standards and best practices.

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