

## Record SPECjvm98 Score for IBM Developer Kit for Windows, Java Technology Edition, Version 1.1.7, on IBM's Netfinity 7000 M10 Server

A record -setting SPECjvm98\*\* peak score of 37 was recently obtained on an IBM Netfinity\* 7000 M10 configured with one 500MHz<sup>1</sup> Pentium\*\* III Xeon\*\* processor, 2MB L2 cache, and 4GB memory. The benchmark was run on a Microsoft\*\* Windows NT\*\* Server 4.0 Enterprise Edition with Service Pack 4; Microsoft Internet Information Server 4.0; and IBM Developer Kit, Java 117, with 1536MB of Java heap size.

The results of the top five performers posted at <http://www.spec.org/osg/jvm98/results/jvm98.html> are shown in the following table, current as of April 28, 1999.

Java Platform	SPECjvm98 Score
IBM Netfinity 7000 M10, Developer Kit for Windows, Java 117 (1)	37
IBM Netfinity 5500, Developer Kit for Windows, Java 117 (2)	22.6
Sun Enterprise E4500, JDK 1.2.1_01 (3)	21.9
IBM Netfinity 5500, Developer Kit for OS/2, Java 117 (4)	21.4
IBM Netfinity 5500, Developer Kit for OS/2, Java 116 (5)	21.2

### Notes

(1) IBM's score of 37 was obtained on a Netfinity 7000 M10 configured with a single 500MHz Pentium III Xeon processor, 2MB L2 cache, and 4GB memory. The benchmark was run using Windows NT Server 4.0 Enterprise Edition with Service Pack 4; Microsoft Internet Information Server 4.0; and IBM Developer Kit for Windows, Java 117, with 1536MB of Java heap size.

(2) IBM's score of 22.6 was obtained on a Netfinity 5500 (Model 8660-11U) configured with a single Pentium II 350MHz; 512KB L2 cache; 256MB memory; Windows NT Server 4.0 with Service Pack 3; Microsoft Internet Information Server 4.0; and IBM Developer Kit for Windows, Java 117, with 64MB of Java heap size.

(3) Sun's score of 21.9 was obtained on an Enterprise E4500 system configured with a 400MHz UltraSPARC-II processor, 4MB L2 cache, 256MB memory, Solaris 7, Apache Web Server 1.3.1, and Solaris JDK\_1.2\_01 with 64MB of Java heap size.

(4) IBM's score of 21.4 was obtained on a Netfinity 5500 (Model 8660-11U) configured with a single Pentium II 350MHz; 512 KB L2 cache; 256MB memory; OS/2 Warp Server 4; Apache Web Server Version 1.3.1; and IBM Developer Kit for OS/2\*, Java 117, with 64MB of Java heap size.

(5) IBM's score of 21.2 was obtained on a Netfinity 5500 (Model 8660-11U) configured with a single Pentium II 350MHz; 512KB L2 cache; 256MB memory, OS/2 Warp Server 4; Apache Web Server Version 1.3.1; and IBM Developer Kit for OS/2, Java 116, with 64MB of Java heap size.

### About IBM Developer Kit for Windows, Java Technology Edition, Version 1.1.7

The IBM Developer Kit for Windows, Java Technology Edition, Version 1.1.7, and IBM Runtime Environment for Windows, Java Technology Edition, Version 1.1.7, are both available at no charge for Windows 95, Windows 98, and Windows NT operating systems. Developers can immediately download either product by visiting IBM's Web site at <http://www.ibm.com/java/jdk/117>.

The product includes a variety of performance innovations such as IBM's third-generation, Just-In-Time Compiler, combined with a Mixed Mode Interpreter. The interpreter compiles only the selected portions of the Java program that are executed repeatedly. This feature provides fast load time and initialization and highly optimized executable code. In addition, it also addresses customer needs for fast Java performance on the server. IBM has developed more efficient memory management for the larger memory capacity of server-side systems. With improvements in synchronization, object allocation, garbage collection, and the Java communications area, the IBM Developer Kit delivers excellent scaling characteristics. Large numbers of socket connections can be sustained and deliver high throughput, and transaction processing scales well as more processors are added.

IBM is committed to making Java efficient for e-business. Java performance is key to achieving this objective. The Java runtime from IBM is the performance leader in the industry according to SPECjvm98 and VolanoMark benchmarks. A detailed description is available at <http://www.ibm.com/java/education/win32117/win32-performance.html>.

IBM offers a full range of support programs for both products to make it easy for developers to take advantage of the product's capabilities, including technical and help-desk support. The Developer Kit and Runtime Environment for Windows are the latest of IBM's high-performance Java offerings adding to those already shipping with the OS/2, AIX\*, OS/400\* and OS/390\* operating systems. For more information on IBM resource for Java developers, visit <http://www.ibm.com/java>.

### **About SPECjvm98**

The SPECjvm98 benchmark is comprised of eight tests, five of which are either real applications or derived from real applications that are commercially available. The tests measure the time it takes to load the program, verify the class files, compile on the fly if a JIT compiler is used, and execute the test. Each test is run several times and two scores are generated: a "worst" score for the slowest time and a "best" score for the fastest. A geometric mean is used to compute a composite score for all tests. Higher scores indicate better performance.

SPECjvm98 reports for results cited in this article, as well as all other published results, are available on the World Wide Web at <http://www.spec.org/osg/jvm98>.

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Specific information about IBM Netfinity products, services and support can be located at <http://www.ibm.com/netfinity>.

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<sup>1</sup>MHz only measures microprocessor internal clock speed, not application performance. Many factors affect application performance.

Results referenced in this document are current as of April 28, 1999. Competitors' results are provided for comparison. All competitive results shown are based on the benchmark measurements conducted by the respective companies. IBM did not test or in any way verify the results obtained by these companies. The configuration of the server under test as well as the test environment may vary. Readers are encouraged to examine the companies'

published disclosure reports for details concerning the server configuration and the methodology used to obtain the published results.

Data on competitive products was obtained from publicly available information and is subject to change without notice. Contact the manufacturer for the most recent information.

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