



Performance Brief

xSeries 445 server delivers impressive compute-intensive performance

September 2003

The IBM® @server® 445, powered by the Intel® Xeon™ 2.8GHz processor, demonstrates excellent compute-intensive performance when running SPECint_rate2000, one of the SPEC CPU2000 benchmark suites. (1) SPECint_rate2000, which measures processor throughput, was used to measure both 8- and 16-way configurations.

| x445 | |
|--|----------------------------------|
| 8-Way | 16-Way |
| SPECint_rate2000 | SPECint_rate2000 |
| 75.2 | 131 |
| System Hardware | |
| 8 x Intel Xeon 2.8GHz Processor | 16 x Intel Xeon 2.8GHz Processor |
| 512KB L2 Cache | |
| 2MB L3 Cache | |
| 8GB Memory | 16GB Memory |
| 2 x 36.4GB SCSI Disk Drive | |
| Operating System and Compilers | |
| Microsoft® Windows® 2003 Server Enterprise Edition | |
| Intel C++ Compiler 7.0 | |

To view all SPEC CPU2000 benchmark results, visit www.spec.org.

(1) SPEC CPU2000, a next-generation industry-standard CPU-intensive benchmark suite, provides a comparative measure of compute-intensive performance across the widest practical range of hardware. SPEC CPU2000 standardized benchmarks reflect advances in microprocessor technologies, compilers and applications that have taken place over the last five years. SPEC CPU2000 measures system speed and throughput for single-processor, symmetric-multiprocessor, and cluster systems.

SPEC CPU2000 comprises two sets (or suites) of benchmarks: CINT2000 for measuring compute-intensive integer performance, and CFP2000 for compute-intensive floating point performance. The two suites measure the performance of a computer's processor, memory architecture and compiler. Run and reporting rules permit baseline and optimized (peak) results for the CINT2000 and CFP2000 suites. CINT2000 measures compute-intensive integer performance. The

throughput metric, SPECint_rate2000, measures the number of tasks a computer can complete in a given amount of time. The speed metric, SPECint2000, measures how fast a machine completes the running of the CINT2000 suite. CFP2000 measures compute-intensive floating point performance. The throughput metric, SPECfp_rate2000, measures the number of tasks a computer can complete in a given amount of time. The speed metric, SPECfp2000, measures how fast a machine completes the running of the CFP2000 suite.

THE INFORMATION CONTAINED IN THIS DOCUMENT IS DISTRIBUTED ON AN AS IS BASIS WITHOUT ANY WARRANTY EITHER EXPRESS OR IMPLIED. The use of this information or the implementation of any of these techniques is the customer's responsibility and depends on the customer's ability to evaluate and integrate them into the customer's operational environment. While each item has been reviewed by IBM for accuracy in a specific situation, there is no guarantee that the same or similar results will be obtained elsewhere. Customers attempting to adapt these techniques to their own environment do so at their own risk.

This publication was produced in the United States. IBM may not offer the products, services, or features discussed in this document in other countries, and the information is subject to change without notice. Consult your local IBM representative for information on products and services available in your area.

Published by the IBM xSeries Server Performance Laboratory, IBM Corp.

© Copyright International Business Machines Corporation 2003. All rights reserved.

Permission is granted to reproduce this document in whole or in part, provided the copyright notice as printed above is set forth in full text at the beginning or end of each reproduced document or portion thereof.

Note to U.S. Government Users — Documentation related to restricted rights — Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract with IBM Corp.

IBM, xSeries and the e-business logo are trademarks or registered trademarks of International Business Machines Corporation.

Intel and Xeon are trademarks or registered trademarks of Intel Corporation.

Microsoft and Windows are trademarks or registered trademarks in the United States and/or other countries.

SPEC and the benchmark names SPECcpu2000, SPECfp2000, SPECfp_rate2000, SPECint2000 and SPECint_rate2000 are registered trademarks of the Standard Performance Evaluation Corporation.

All other company/product names and service marks may be trademarks or registered trademarks of their respective companies.