# IBM Netfinity 8500R Delivers Leadership Performance for SAP R/3 Two-Tier SD Benchmark on an Eight-Way Intel-Based Server

The IBM Netfinity* 8500R, previewed worldwide today, has demonstrated leadership performance in preliminary[1] benchmark testing, running the SAP** R/3 Two-Tier Centralized Sales and Distribution (SD) Benchmark on an eight-way, Intel-based server. The IBM Netfinity 8500R server achieved 374 SD Benchmark users with 1.99 seconds average dialog response time on Oracle 8.0.4.2 and Microsoft Windows NT Server 4.0 Enterprise Edition. The measured throughput of 112,000 dialog steps per hour represents 37,330 fully processed order line items per hour. This is a new record for eight-way results using the latest Intel** Pentium** III Xeon** processor.

## The Benchmark Environment

The hardware configuration for the 374 SD benchmark user run consisted of one database server, an IBM Netfinity 8500R server with eight 550MHz Pentium III Xeon processors with 2MB L2 cache, 4GB of main memory, and 455GB of total disk space running Windows NT Server 4.0 Enterprise Edition with Service Pack 3, Oracle 8.0.4.2 and SAP's R/3 SD Benchmark, Release 4.0 B. The measured throughput was 112,000 dialog steps per hour with an average CPU utilization of 99 percent for the central server. The central installation server ran Microsoft Windows NT Server 4.0 with Service Pack 3.

This benchmark fully complies with SAP's issued benchmark regulations and has been audited and certified by SAP. Details can be obtained from IBM and SAP AG. The benchmark was performed at IBM's Netfinity Server Performance Laboratory in Research Triangle Park, NC, by IBM engineers.

## 1. General Information about Benchmark Environment

| | |
|---|---|
| **Certification Number** | 1999015 |
| **Hardware Partner** | International Business Machines Corporation |
| **Contact Name/Tel./Mail ID** | Phil Horwitz / horwitzp@us.ibm.com |
| **R/3 Release** | 4.0 B |
| **DBMS Version** | Oracle 8.0.4.2 |
| **Date** | June 22, 1999 |
| **Location** | Research Triangle Park, NC, USA |
| **Lead Engineers** | IBM: Phil Horwitz, Martha Centeno, Craig R. Smith |
| **Published** | Yes |

[1] These results were achieved with the Intel 550MHz Pentium III Xeon processor. The Netfinity 8500R server is planned to be available in the third quarter 1999.

## 2. Detailed Hardware and System Software Configuration

| **Central Server** | | | |
|---|---|---|---|
| **System Name / Model** | IBM Netfinity 8500R | | |
| **Processor Type / Clock Rate / Number of Processors** | Intel Pentium III Xeon 550MHz / 8 | | |
| **Cache Size / Level** | 2MB / Level 2 | | |
| **Memory** | 4GB | | |
| **Operating System** | Windows NT Server 4.0 Enterprise Edition with Service Pack 3 | | |
| **Database System** | Oracle 8.0.4.2 | | |
| **Number of Disks** | 50 External, Total Disk Space: 455GB | | |
| **I/O Subsystem** | | | |
| **Controller Number** | **Number of Disk Drives** | **RAID Level** | **Contents** |
| 1st ServeRAID-3H Ch. 1 | 10 x 9.1GB External Drives | 0 | SAPDATA |
| 1st ServeRAID-3H Ch. 2 | 10 x 9.1GB External Drives | 0 | SAPDATA |
| 1st ServeRAID-3H Ch. 3 | 10 x 9.1GB External Drives | 0 | SAPDATA |
| 2nd ServeRAID-3H Ch. 1 | 10 x 9.1GB External Drives | 1 | Redo Logs |
| 2nd ServeRAID-3H Ch. 2 | 10 x 9.1GB External Drives | 1 | Redo Logs |

| **Benchmark Driver (1)** | |
|---|---|
| **System Name / Model** | IBM RS/6000* PowerPC* Model F50 |
| **Processor Type / Clock Rate / Number of Processors** | IBM PowerPC 166MHz / 4 |
| **Memory** | 3072MB |
| **Operating System** | AIX* |
| **Number of Disks** | 4 |

| **Network Configuration** | |
|---|---|
| **Type** | 100Mbps Switched Ethernet |
| **Number of Segments** | 1 Segment Attached to a Switched Hub |
| **Speed** | 100Mbps Full-Duplex Ethernet |

## 3. Detailed R/3 Configuration

| **SAP R/3 Configuration** | |
|---|---|
| SAP R/3 Version (Application) | SAP R/3 4.0 B |
| SAP R/3 Version (Kernel) | SAP R/3 4.0 B |
| Number of benchmark clients used | 374 |

| R/3 Module | Simulated Benchmark Users | Dialog Step / Hour | Average Response Time | Average** CPU Utilization of Database Server | Average DB Response Time | Response Time Distribution |
|---|---|---|---|---|---|---|
| SD | 374 | 112,000 | 1.99 | 99% | d: 116 ms<br>u: 305 ms | 53% under 2 seconds |

** as in SAP Operating System Monitor
*** as in SAP Workload Monitor

| Hardware Disclosure | | |
|---|---|---|
| **Quantity** | **Part Number** | **Description** |
| **Database Servers (1)** | | |
| 1 | 8681-6RY | IBM Netfinity 8500R |
| 8 | 28L4735 | IBM Netfinity 550MHz/2MB L2 Cache Processor |
| 4 | 94G7385 | IBM Netfinity 1024MB Memory Expansion Kit |
| 2 | 01K7207 | IBM ServeRAID-3H Ultra2 SCSI Adapter |
| 1 | 34L0901 | Ethernet 10/100 PCI Adapter |
| 8 | 3520-2RU | IBM Netfinity EXP15 Rack Storage Enclosure with Redundant Power |
| 50 | 01K8499 | IBM EXP10 9.1GB 10K Wide Ultra SCSI Hard Disk Drive |
| 1 | 9306900 | IBM Netfinity Rack |
| 1 | 94G6669 | Side Panel Kit |

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