

## IBM Netfinity 7600 Delivers Leadership Performance for SAP R/3 Two-Tier SD Benchmark on a Four-Way Intel-Based Server

The IBM Netfinity® 7600 demonstrated leadership performance in benchmark testing, running the SAP™ R/3® Two-Tier Centralized Sales and Distribution (SD) Benchmark on a four-way, Intel-based server. The IBM Netfinity 7600 server achieved 204 SD Benchmark users with 1.90 seconds average dialog response time on DB2® UDB Version 7.1 and Red Hat Linux 6.1 EV. The measured throughput of 62,000 dialog steps per hour represents 20,670 fully processed order line items per hour. This is a new record for four-way results using the latest Intel® Pentium® III Xeon® processor.

### The Benchmark Environment

The hardware configuration for the 204 SD benchmark user run consisted of one database server, an IBM Netfinity 7600 server with four 700MHz Pentium III Xeon processors with 2MB L2 cache, 4GB of main memory, and 144GB of total disk space running Red Hat Linux 6.1 EV, DB2 UDB Version 7.1 and the R/3 SD Benchmark, Release 4.6 B. The measured throughput was 62,000 dialog steps per hour with an average CPU utilization of 99 percent for the central server. The central installation server ran Red Hat Linux 6.1 EV (2.2.16 kernel).

This benchmark fully complies with the R/3 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 Toronto Laboratory in Toronto, Canada, by IBM engineers.

### 1. General Information about the Benchmark Environment

<b>Certification Number</b>	2000028
<b>Hardware Partner</b>	International Business Machines Corporation
<b>Contact Name/Tel./Mail ID</b>	Param Singh (paramjit@us.ibm.com), Ph: 919-486-0381, Research Triangle Park, NC USA
<b>R/3 Release</b>	4.6 B
<b>DBMS Version</b>	DB2 UDB Version 7.1
<b>Date</b>	November 22, 2000
<b>Location</b>	Toronto, Canada
<b>Lead Engineers</b>	IBM: Russ Stocker and Ronen Grosman
<b>Published</b>	Yes

## 2. Detailed Hardware and System Software Configuration

Central Server			
System Name / Model	IBM Netfinity 7600		
Processor Type / Clock Rate / Number of Processors	Intel Pentium III Xeon 700MHz / 4		
Cache Size / Level	2MB / Level 2		
Memory	4GB		
Operating System	Red Hat Linux 6.1 EV (2.2.16 kernel)		
Database System	DB2 UDB Version 7.1		
Number of Disks	30 External, 5 Internal, Total Disk Space: 144GB		
I/O Subsystem			
Controller Number	Number of Disk Drives	RAID Level	Contents
Adaptec 7896	1 x 9.1GB, 4 x 4.51GB Internal Drives	0	OS/sap/swap space
1st ServeRAID-3H Ch. 1	5 x 4.51GB External Drives	5	log
1st ServeRAID-3H Ch. 1	5 x 4.51GB External Drives	0	SAPDATA
1st ServeRAID-3H Ch. 2	10 x 4.51GB External Drives	0	SAPDATA
2nd ServeRAID-3H Ch. 1	10 x 4.51GB External Drives	0	SAPDATA

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 4.6 B
SAP R/3 Version (Kernel)	SAP R/3 4.6 B
Number of benchmark clients used	3

## 4. Results Summary

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	204	62,000	1.90 sec.	99%	d: 295 ms u: 232 ms	67% under 2 seconds

\*\* as in SAP Operating System Monitor

\*\*\* as in SAP Workload Monitor

## 5. Hardware Disclosure

Quantity	Part number	Description
1	8665-5RY	IBM Netfinity 7600
4	10K2332	IBM Netfinity 700MHz/2MB L2 Cache Processor
8	33L3119	1GB ECC SDRAM RDIMM Memory
2	37L6086	IBM ServeRAID-3HB Ultra2 SCSI Adapter
1	34L1501	Ethernet 10/100 PCI Adapter
1	37L7204	9.1GB Ultra160 SCSI Hard Disk Drive
34	01K7960	4.51GB Wide Ultra2 SCSI Hard Disk Drive
3	3520-2RU	IBM Netfinity EXP10 Rack Storage Enclosure
1	9306900	IBM Netfinity Rack
1	94G6669	Side Panel Kit

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**Notes**

(1) MHz only measures microprocessor internal clock speed, not application performance. Many factors affect application performance.

(2) When referring to hard disk capacities, GB, or gigabyte, means one billion bytes. Total user-accessible capacity may be less.

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