

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

June 26, 2000 ... The IBM Netfinity* 7600, using the Intel** Pentium** III Xeon** 700MHz processor, has 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 Netfinity 7600 server, running DB2* Universal Database V6.1 and Microsoft** Windows** 2000 Advanced Server, achieved 185 SD benchmark users with 1.73 seconds average dialog response time. The measured throughput of 57,000 dialog steps per hour represents 19,000 fully processed order line items per hour.

The Benchmark Environment

The hardware configuration for the 185 SD benchmark user run consisted of one database server, an IBM Netfinity 7600 server configured with four 700MHz Pentium III Xeon processors with 2MB L2 cache, 4GB of main memory, and 327GB of total disk space running Windows 2000 Advanced Server, DB2 UDB V6.1 and SAP's R/3 SD Benchmark, Release 4.6 B. The measured throughput was 57,000 dialog steps per hour with an average CPU utilization of 84 percent for the central server. The central installation server ran Microsoft Windows 2000 Advanced Server.

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	2000017
Hardware Partner	International Business Machines Corporation
Contact Name/Tel./Mail ID	Param Singh / paramjit @ us.ibm.com
R/3 Release	4.6 B
DBMS Version	DB2 UDB V6.1
Date	June 16, 2000
Location	Research Triangle Park, NC, USA
Lead Engineers	IBM: Param Singh
Published	June 26, 2000

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	Windows 2000 Advanced Server		
Database System	DB2 UDB V6.1		
Number of Disks	36 External, Total Disk Space: 327GB		
I/O Subsystem			
Controller Number	Number of Disk Drives	RAID Level	Contents
1st ServeRAID-3HB Ch. 1	10 x 9.1GB External Drives	0	DB2, SAP, W2K S/W AND PAGEFILE
1st ServeRAID-3HB Ch. 2	10 x 9.1GB External Drives	0	SAPDATA
1st ServeRAID-3HB Ch. 3	6 x 9.1GB External Drives	5	LOG FLE
2nd ServeRAID-3HB Ch. 1	10 x 9.1GB External Drives	0	PAGEFILES

Benchmark Driver (1)	
System Name / Model	IBM Netfinity 7000 M10
Processor Type / Clock Rate / Number of Processors	Intel Pentium III Xeon / 500MHz / 4
Memory	4GB
Operating System	Red Hat Linux 6.1
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 KERNEL 201
Number of benchmark clients used	185

R/3 Module	Simulated Benchmark Users	Dialog Step / Hour	Average Response Time (Seconds)	Average** CPU Utilization of Database Server	Average DB Request Time (Seconds)
SD	185	57,000	1.73	84%	dialog: 0.055 update: 0.280

** as in SAP Operating System Monitor

*** as in SAP Workload Monitor

Hardware Disclosure		
Quantity	Part Number	Description
Database Servers (1)		
1	8665-3RY	IBM Netfinity 7600
8	10K2332	Pentium III Xeon 700MHz/2MB L2 Cache Processor
8	33L3115	100MHz ECC SDRAM RDIMM
2	37L6086	IBM ServeRAID-3HB Ultra2 SCSI Adapter
1	34L0901	Ethernet 10/100 PCI Adapter
4	3520-2RU	IBM Netfinity EXP15 Rack Storage Enclosure with Redundant Power
36	36K9748	9.1GB 10K-3 Wide Ultra2 SCSI Hard Disk Drive
1	9306900	IBM Netfinity Rack
1	94G6669	Side Panel Kit

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The SAP standard 4.6 B application benchmark performed on June 16, 2000 by IBM in Raleigh, USA, was certified on June 26, 2000 with the following data:

Number of benchmark users & comp.:	185 SD (Sales & Distribution)
Average dialog response time:	1.73 seconds
Throughput:	
Processed Order Line items / hour:	19,000
Dialog steps / hour:	57,000
SAPS:	950
Average DB request time (dia/upd):	0.055 sec / 0.280 sec
CPU utilization central server:	84%
Operating System central:	Windows 2000
RDBMS:	DB2 UDB V6.1
R/3 Release:	4.6 B
Total disk space:	327 GB

Configuration:

1 Central Server: IBM Netfinity 7600, 4-processors SMP, Pentium III Xeon
700 MHz, 2 MB L2 cache, 4 GB main memory

