SPECsfs97 Result

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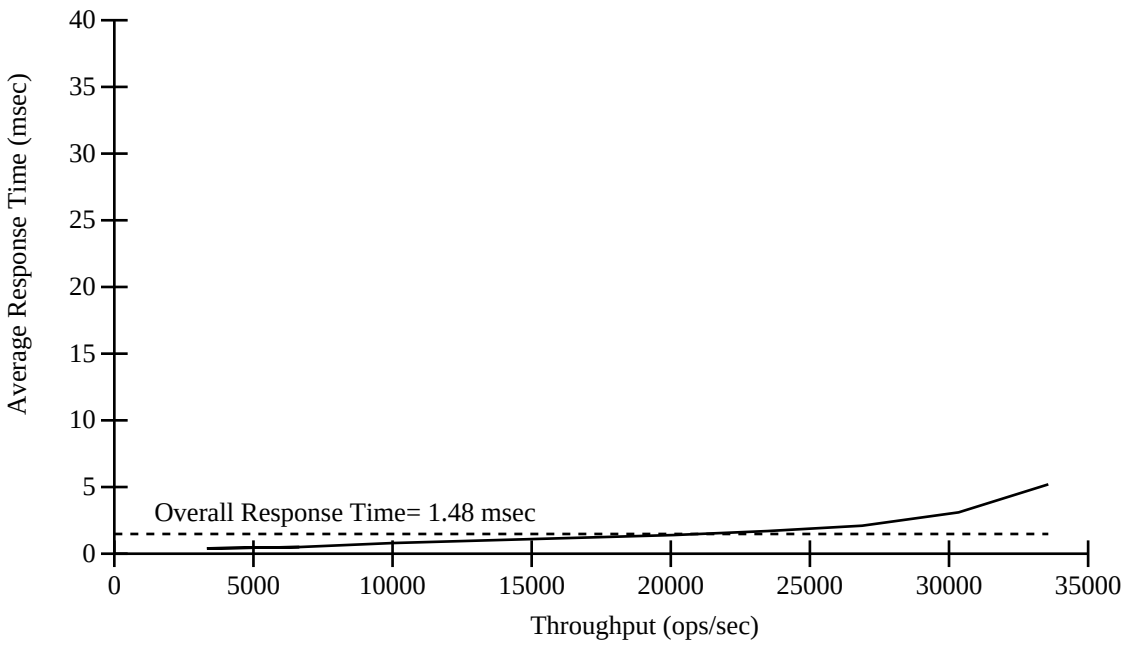
IBM Corporation
IBM eServer pSeries 630 Model 6E4 (TCP)

SPECsfs97_R1.v3 =
33569 Ops/Sec (Overall Response Time = 1.48 msec)

Tested:	January 2003	By:	IBM Corporation	License #:	11	Hardware Avail:	February 2003	Software Avail:	May 2003

Throughput (ops/sec)	Average Response (msec)
3327	0.4
6649	0.5
10008	0.8
13377	1.0
16758	1.2
20112	1.4
23486	1.7
26878	2.1
30345	3.1
33569	**5.2**



CPU, Memory and Power

Model Name:	IBM eServer pSeries 630 Model 6E4 (TCP)
Processor:	1.45GHz POWER4+
# of Processors:	4
Primary Cache:	64KBI+32KBD on chip per CPU
Secondary Cache:	1536KB shared, unified on chip per SCM
Other Cache:	8MB unified off chip per SCM, 2 SCMs in SUT
UPS:	N/A
Other Hardware:	N/A
Memory Size:	24 GB
NVRAM Size:	4 GB (4 x 1GB)
NVRAM Type:	1GB battery-backed DRAM per controller
NVRAM Description:	5-day battery; cache bypass on battery failure

Server Software

OS Name and Version:	AIX 5L V5.2 (64-bit)
Other Software:	N/A
File System:	JFS and Enhanced JFS
NFS version:	3

Network Subsystem

Network Type:	Jumbo Frame Gigabit
Network Controller Desc.:	IBM 10/100/1000 Base-TX Ethernet PCI-X Adapter
Number Networks:	2 (N1-N2)
Number Network Controllers:	2
Protocol Type:	TCP
Switch Type:	N/A
Bridge Type:	N/A
Hub Type:	N/A
Other Network Hardware:	N/A

Server Tuning

Buffer Cache Size:	Dynamic
# NFS Processes:	1
Fileset Size:	319.1 GB

Disk Subsystem

Number Disk Controllers:	5
Number of Disks:	141
Number of Filesystems:	28 (F1-F28)
File System Creation Ops:	default
File System Config:	See Other Notes

Disk Controller:	Wide/Ultra-3 SCSI I/O Controller
# of Controller Type:	1
Number of Disks:	1
Disk Type:	18.2GB 10Krpm 16-bit SCSI
File Systems on Disks:	OS, page space
Special Config Notes:	N/A

Disk Controller:	IBM Fiber Channel Adapter (2Gbps)
# of Controller Type:	4
Number of Disks:	140
Disk Type:	18.2GB 15Krpm 2Gb FC
File Systems on Disks:	F1-F7,F8-F14,F15-F21,F22-F28
Special Config Notes:	See Other Notes

For More Information contact

SPEC

info@spec.org
http://www.spec.org/

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Load Generator (LG) Configuration

Number of Load Generators:	2
Number of Processes per LG:	84
Biod Max Read Setting:	2
Biod Max Write Setting:	2
LG Type:	LG1
LG Model:	IBM eServer pSeries 620 Model 6F1
Number and Type Processors:	4 x 750MHz RS64 IV
Memory Size:	8 GB
Operating System:	AIX 5L V5.2
Compiler:	N/A, SFS97_R1 pre-compiled binaries
Compiler Options:	N/A
Network Type:	IBM 10/100/1000 Base-T Ethernet PCI Adapter

Testbed Configuration

LG #	LG Type	Network	Target File Systems	Notes
1	LG1	N1	F1,F15,F8,F22,F2,F16,F9,F23,...,F7,F21,F14,F28,F1,F15,F8,F22,...,F14,F28,F1,F15,F8,F22,...,F14,F28	N/A
2	LG1	N2	F1,F15,F8,F22,F2,F16,F9,F23,...,F7,F21,F14,F28,F1,F15,F8,F22,...,F14,F28,F1,F15,F8,F22,...,F14,F28	N/A

Notes/Tuning Information

Other Notes
-There are 2 IBM TotalStorage FAStT700 Storage Server units attached to
-the SUT. Each FAStT700 contains 2 controllers. Each controller is
-connected to an FC adapter. Also, each controller has a 1GB cache.
-Writes to either cache are mirrored in the other such that the total
-effective write cache is 1GB per FAStT700. There are 5 EXP700 expansion
-units connected to each FAStT700. Every EXP700 contains 14 physical
-disks. A logical disk is composed of 5 physical disks in a RAID-5
-configuration. There is one test filesystem per logical disk.
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-JFS used for the OS, Enhanced JFS used for the test filesystems (F1-F28).
-The size of each test filesystem log is 256MB.
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-SCM stands for Single-Chip Module. There are 2 CPUs per SCM.
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-No external I/O drawers were used in this configuration.
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-Using jumbo frames (9000-byte MTU) over Gigabit Ethernet.
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-Server tuning: Gigabit Ethernet adapter jumbo_frames=yes,
-nfs_server_base_priority=80, nfs_server_clread=0
-
-Client tuning: Gigabit Ethernet adapter jumbo_frames=yes
-
-The number of NFS daemons (nfsd threads) is dynamic.
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-APAR IY36772 (May 2003 release) beta applied on AIX 5L V5.2.
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-The benchmark run was done on a p630 Model 6C4 machine. The 6C4 (rack)
-and 6E4 (deskside) models are electronically equivalent.