SPEC SFS 1 Summary (Side 1 of 2) 097.LADDIS

IBM Corporation

RS/6000 Enterprise Server Model S70

Server Hardware

CPU, Memory, & Power

Model No.	S70
CPU	125MHz Power RS64
# of CPUs	12
Primary Cache	64KBI+64KBD on chip
Secondary Cache	4MB(I+D) off chip
Other Cache	None
Memory	4GB
UPS	None
Other hardware	ATM

Server Software

OS Version	AIX 4.3.0
Other software	None
File system	AIX/JFS

Load Generators (LGs)

Number of Load Generators:	6
Processes Per Load Generator:	48
Biod_Max_Reads:	4
Biod_Max_Writes:	4

Disk Subsystem & Filesystems

(Full Configuration on Side 2)

Num Disk Controllers	5
Num Disks	193
Num File Systems	96 (F1 thru F96)

Network Subsystem

(Full Configuration On Side 2)

Num Net Controllers	3
Num Networks	3 (N1 thru N3)
Type Network	ATM

Server Tuning

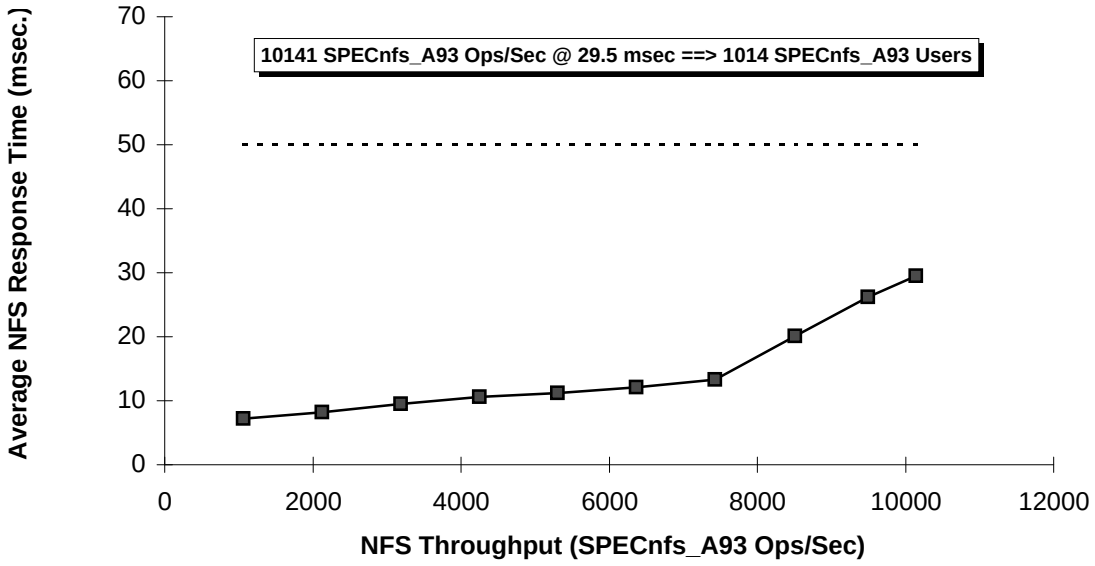
(Also see Notes/Tuning below)

Buffer Cache Size	Dynamic
Num NFS Daemons	288
Fileset Size	55GB

NFS Throughput SPECnfs_A93 Ops/Sec	Avg. Response Time (NFS) Milliseconds
1060	7.2
2121	8.2
3184	9.5
4247	10.6
5308	11.2
6364	12.1
7426	13.3
8507	20.1
9492	26.2
10141	29.5

Hardware Availability: Oct-97 **Software Availability:** Oct-97

License #: 11 **Tested:** Jan-98 **By:** IBM **Of:** Austin, TX



Notes/Summary Of Tuning Parameters: (Continued on Side 2 of 2)

Server Tuning: sb_max=2000000, thewall=131072, vmtune -P 100, vmtune -r 0 -R 0,
nfs_socketsize=800000, nfs_server_clread=0, nfs_max_threads=288,
ATM adapter sw_txq_size=250

Client Tuning: ATM adapter sw_txq_size=250

SSA adapters configured in non-RAID mode. Two disks per filesystem: one contains the filesystem data, the other contains the filesystem log.

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Detailed Server Description

Network Subsystem

IBM PCI 155 Mbps ATM Adapter (14107c00)
- 1 ATM (N1): 2 LGs
- 1 ATM (N2): 2 LGs
- 1 ATM (N3): 2 LGs

SUT and LG ATM adapters all connected to 155Mbps ATM ports on an IBM8260-A17 Nways Multiprotocol Switching Hub.

Disk Subsystem & Filesystems

Controller 1: Wide SCSI I/O Controller
- Disks: 1 4.5 GB 16 Bit SCSI Disk Drive
  - Contents: OS, page space

Controller 2: IBM SSA Enhanced RAID Adapter (14104500)
- Disks: 48 x 2.2GB SSA (88G6400)
  - Contents: F1-F24, filesystem logs for F1-F24

Controller 3: IBM SSA Enhanced RAID Adapter (14104500)
- Disks: 48 x 2.2GB SSA (88G6400)
  - Contents: F25-F48, filesystem logs for F25-F48

Controller 4: IBM SSA Enhanced RAID Adapter (14104500)
- Disks: 48 x 2.2GB SSA (88G6400)
  - Contents: F49-F72, filesystem logs for F49-F72

Controller 5: IBM SSA Enhanced RAID Adapter (14104500)
- Disks: 48 x 2.2GB SSA (88G6400)
  - Contents: F73-F96, filesystem logs for F73-F96

Detailed Load Generator (LG) Description

Load Gen. Type	*Model*	*# of CPUs*	*RAM*	*OS*	*Compiler*
LG1	RS/6000 39H	1	512MB	AIX 4.2.1	CSet++ 3.1.1

Testbed Configuration

Load Gen. #	*Load Gen. Type*	*Network*	*Target File Systems*	*Notes*
1	LG1	N1	F1,F3,F5,F7,...,F91,F93,F95	vers=2,proto=udp
2	LG1	N2	F2,F4,F6,F8,...,F92,F94,F96	vers=2,proto=udp
3	LG1	N3	F1,F3,F5,F7,...,F91,F93,F95	vers=2,proto=udp
4	LG1	N1	F2,F4,F6,F8,...,F92,F94,F96	vers=2,proto=udp
5	LG1	N2	F1,F3,F5,F7,...,F91,F93,F95	vers=2,proto=udp
6	LG1	N3	F2,F4,F6,F8,...,F92,F94,F96	vers=2,proto=udp

Notes/Summary Of Tuning Parameters: (Continued from Side 1 of 2)

APAR IX72736 installed (functional fix).