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

Network Appliance
F220

Server Hardware

CPU, Memory, & Power

Model No.	F220-64-2N-0
CPU	75MHz Pentium
# of CPUs	1
Primary Cache	8KBI+8KBD on chip
Secondary Cache	none
Other Cache	8MB NVRAM
Memory	256MB
UPS	None
Other hardware	FDDI

Disk Subsystem & Filesystems

(Full Configuration on Side 2)

Num Disk Controllers	2
Num Disks	14
Num File Systems	1

Network Subsystem

(Full Configuration On Side 2)

Num Net Controllers	1
Num Networks	1 (N1)
Type Network	FDDI

Server Software

OS Version	FAServer Software 3.1 Beta
Other software	None
File system	WAFL

Server Tuning

(Also see Notes/Tuning below)

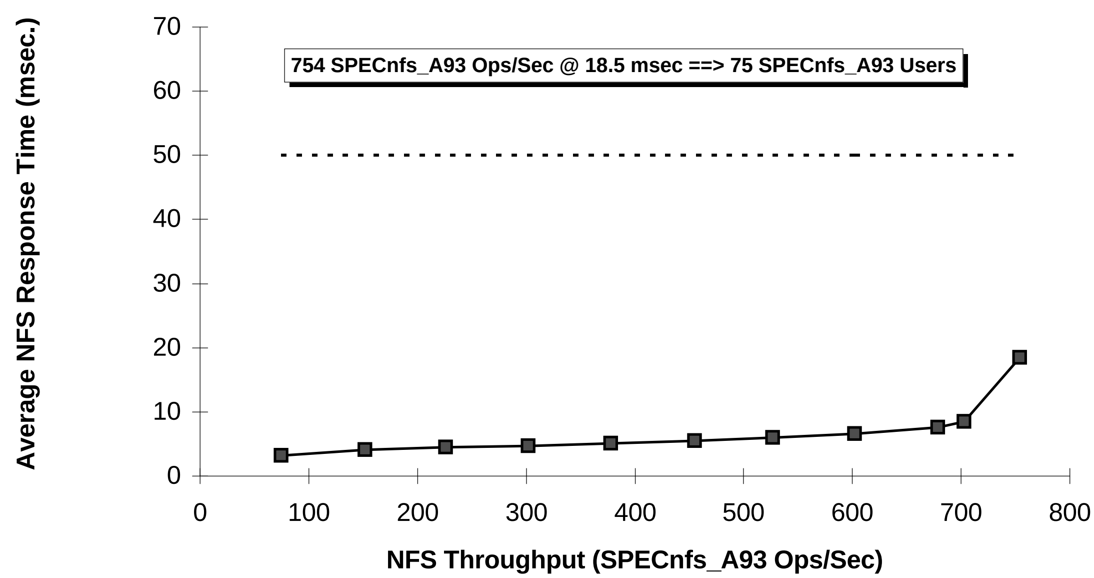
Buffer Cache Size	Dynamic
Num NFS Daemons	See Notes
Fileset Size	4.0GB

Load Generators (LGs)

Number of Load Generators:	4
Processes Per Load Generator:	3
Biod_Max_Reads:	2
Biod_Max_Writes:	2

Hardware Availability: Feb-96		**Software Availability:**	Feb-96
License #: 33	**Tested:** Jan-96	**By:** NetApp	**Of:** Mountain View, CA

NFS Throughput SPECnfs_A93 Ops/Sec	Avg. Response Time (NFS) Milliseconds
75	3.2
152	4.1
226	4.5
302	4.7
378	5.1
455	5.5
527	6.0
602	6.6
679	7.6
703	8.5
754	18.5



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

The FAServer uses RAID to combine all of its disks into a single large file system. It uses a real-time embedded kernel that processes NFS requests right from the network layer without any NFS daemons. It uses non-volatile RAM to improve NFS performance.

To run the SFS benchmark, configure the FAServer by adding this line to /etc/rc:

options minra 1 nosnap 1 nosnapdir 1

Network Appliance
F220

Detailed Server Description

Network Subsystem	*Disk Subsystem & Filesystems*
X1102 (SA TP) MLT3 FDDI Adapter	Controller 1: On-board Fast SCSI
1 MLT3 FDDI (N1): 4 LGs per Net	Disks: 7 SCSI X204 2 GB
	Controller 2: X2001 Fast Dual SCSI (one channel used)
	Disks: 7 SCSI X204 2 GB
	Contents: F1 (RAID 4: 13 Data Disks and 1 Parity Disk)

Detailed Load Generator (LG) Description

Load Gen. Type	*Model*	*# of CPUs*	*RAM*	*OS*	*Compiler*
LG1	Axil Model 311	1	32MB	SunOS 4.1.3	/bin/cc

Testbed Configuration

Load Gen. #	*Load Gen. Type*	*Network*	*Target File Systems*	*Notes*
1-4	LG1	N1	F1	Default

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

The adb tool was used to enable UDP checksumming on the load generators:

adb -w -k /vmunix /dev/mem

udp_cksum?W1   udp_cksum/W1