SPECsfs97 Result

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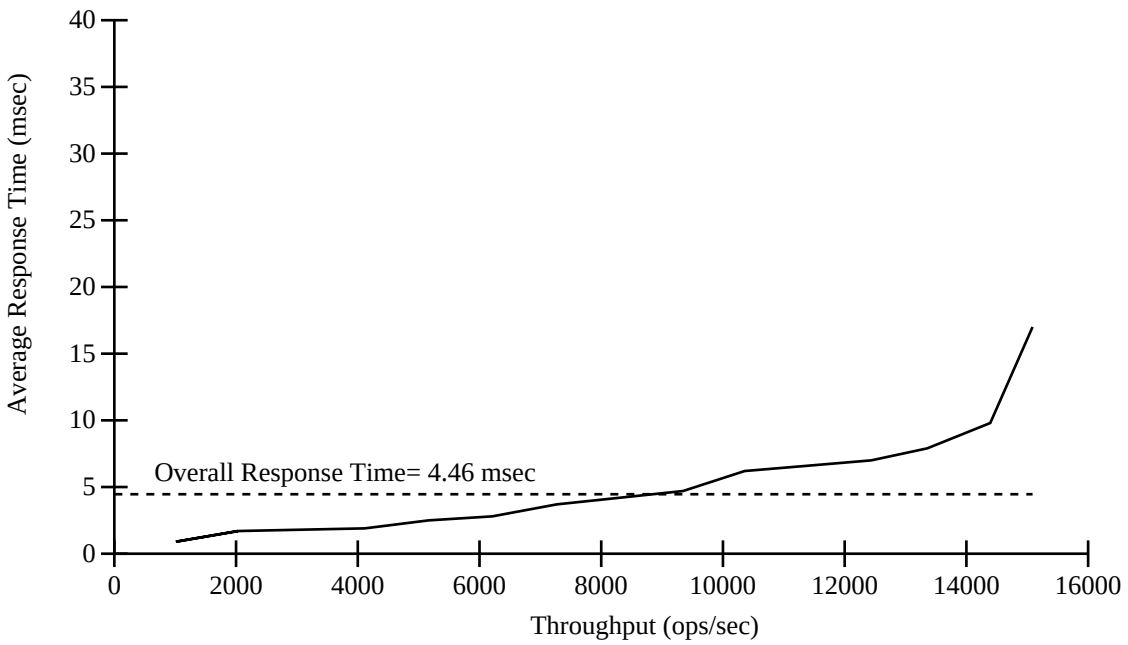
Hewlett Packard
HP Surestore NAS-105L

SPECsfs97_R1.v2 =

15087 Ops/Sec (Overall Response Time = 4.46 msec)

Tested:	Jan 2002	By:	Hewlett Packard	License #:	3	Hardware Avail:	Jan 2002	Software Avail:	Jan 2002

Throughput (ops/sec)	Average Response (msec)
1011	0.9
2033	1.7
3060	1.8
4115	1.9
5164	2.5
6209	2.8
7270	3.7
8311	4.2
9344	4.7
10357	6.2
11402	6.6
12438	7.0
13357	7.9
14392	9.8
15087	**17.0**



CPU, Memory and Power

Model Name:	HP Surestore NAS-105L
Processor:	PA-8600 @ 550 Mhz
# of Processors:	4
Primary Cache:	512 KB Inst, 1 MB data
Secondary Cache:	N/A
Other Cache:	N/A
UPS:	N/A
Other Hardware:	Brocade fibre channel Silkworm 2800
Memory Size:	16 GB
NVRAM Size:	1 GB (512 MB /VA7400)
NVRAM Type:	VA7400
NVRAM Description:	Built into VA7400

Server Software

OS Name and Version:	HP-UX 11.11
Other Software:	N/A
File System:	JFS
NFS version:	2

Network Subsystem

Network Type:	PCI 1000Base-SX Adapter.
Network Controller Desc.:	Gigabit Adapter
Number Networks:	2
Number Network Controllers:	2
Protocol Type:	TCP
Switch Type:	HP Procurve 4000M
Bridge Type:	N/A
Hub Type:	N/A
Other Network Hardware:	N/A

Server Tuning

Buffer Cache Size:	Dynamic with ceiling at 62 percent
# NFS Processes:	128
Fileset Size:	148.5 GB

Disk Subsystem

Number Disk Controllers:	3
Number of Disks:	43
Number of Filesystems:	8
File System Creation Ops:	mkfs -F vxfs -o logsize=2048,bs=8k
File System Config:	N/A
Disk Controller:	Ultra2 Wide SCSI (builtin)
# of Controller Type:	1
Number of Disks:	1
Disk Type:	HP-C4476 18.2GB 10k RPM
File Systems on Disks:	os, swap, dump
Special Config Notes:	N/A
Disk Controller:	PCI FiberChannel A3740A Shortwave
# of Controller Type:	1
Number of Disks:	21
Disk Type:	36 GB, FC, 15K RPM
File Systems on Disks:	F1,F2..F4
Special Config Notes:	See notes below.
Disk Controller:	PCI FiberChannel A3740A Shortwave
# of Controller Type:	1
Number of Disks:	21
Disk Type:	36 GB, FC, 15K RPM
File Systems on Disks:	F5,F6..F8
Special Config Notes:	See notes below.

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Load Generator (LG) Configuration

Number of Load Generators:	16
Number of Processes per LG:	16
Biod Max Read Setting:	2
Biod Max Write Setting:	2
LG Type:	A-Class
LG Model:	A-180C
Number and Type Processors:	PA-7300LC @ 180 MHz
Memory Size:	128 MB
Operating System:	HP-UX 11.00
Compiler:	HP ANSI C compiler
Compiler Options:	+O2 -Ae
Network Type:	PCI 100 BaseT

Testbed Configuration

LG #	LG Type	Network	Target File Systems	Notes
1..16	LG1	N1	F1,F2..F8 / F1,F2..F8 / ...	

Notes/Tuning Information

Other Notes
-Configuration notes.
-.. Server is an rp5470 and contains:
-.. 4cpus, 16GB ram, 2 FC controllers, 2 Gigabit NICs
-.. Server has 2 fibre channel controllers. One
-.. is connected to FC switch #1, the second is
-.. connected to FC switch #2. Each VA7400 has 2 FC ports.
-.. The first VA7400 has one port is connected to FC switch #1
-.. The second VA7400 has one port connected to FC switch #2.
-.. Each VA7400 contains: 42 disks, 512 MB NVram, 1 FC port in use.
-.. Both VA7400s are using RAID 0/1.
-.. Each VA7400 has 4 LUNs. LUNs 1,2,3,4 are striped across 21 disks.
-.. LUNs 5,6,7,8 are striped across the other 21 disks in the second array.
-System tuneables.
-.. bufcache_hash_locks=4096, dbc_min_pct=40
-.. dbc_max_pct=62, dnlc_hash_locks=4096, scsi_max_qdepth=90
-.. ftable_hash_locks=4096, max_thread_proc=1000
-.. maxswapchunks=16384, ncsize=12000, nfile=16384
-.. ninode=800000, nkthread=10000, nproc=4096
-.. nstrpty=200, vnode_hash_locks=4096
-.. nc_hash_size=800000, vps_pagesize=4k,max_fcp_reqs=1024
-.. vx_fancyra_enable=1, create_fastlinks=1, vx_ninode=800000
-Filesystem tunes:
-.. read_unit_io=8192,read_pref_io=8192,write_unit_io=8192,write_pref_io=8192,
-..
max_buf_data_size=8192,read_nstream=1,write_nstream=1000,max_diskq=104857600