SPECsfs97 Result

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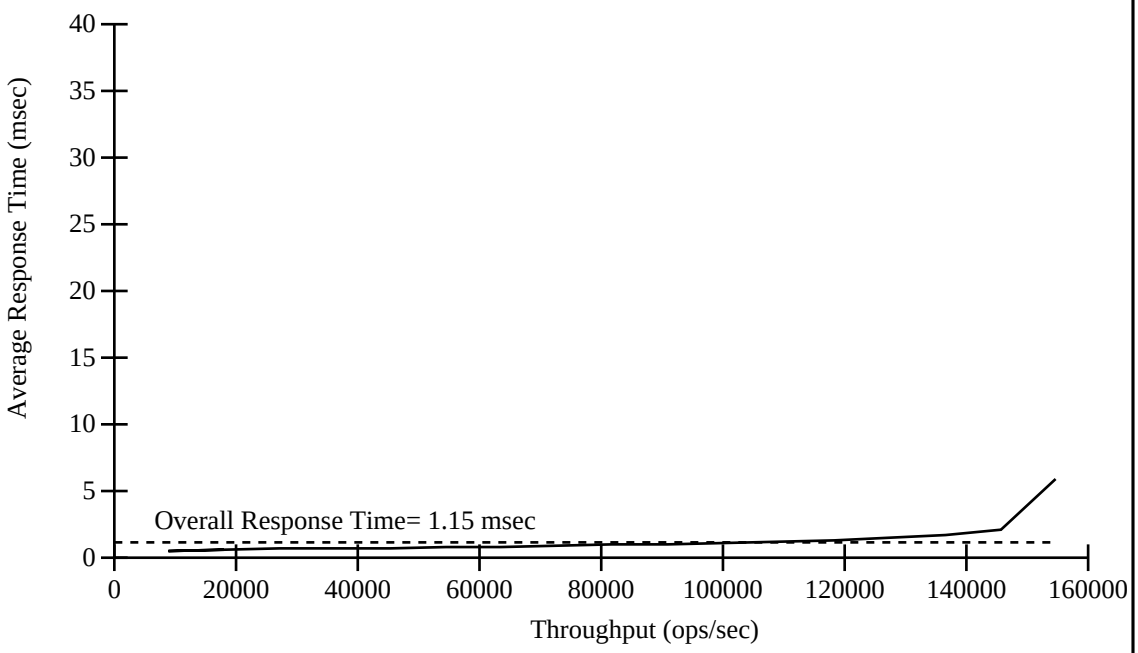
Hewlett Packard
HP AlphaServer GS1280 Model 16 7/1150

SPECsfs97_R1.v2 =
154654 Ops/Sec (Overall Response Time = 1.15 msec)

Tested:	April 2003	By:	Hewlett Packard	License #:	2	Hardware Avail:	January 2003	Software Avail:	January 2003

Throughput (ops/sec)	Average Response (msec)
8888	0.5
18017	0.6
27158	0.7
36272	0.7
45375	0.7
54529	0.8
63497	0.8
72663	0.9
81755	1.0
90901	1.0
99996	1.1
109190	1.2
118310	1.3
127392	1.5
136565	1.7
145679	2.1
154654	**5.9**



CPU, Memory and Power

Model Name:	HP AlphaServer GS1280 Model 16 7/1150
Processor:	1.15 GHz EV7 21364
# of Processors:	16
Primary Cache:	64KB(I)+64KB(D) on chip
Secondary Cache:	1.75MB on chip per CPU
Other Cache:	None
UPS:	--
Other Hardware:	--
Memory Size:	96 GB
NVRAM Size:	4 GB
NVRAM Type:	HSV110 Storage Controller
NVRAM Description:	96 hour battery backup

Server Software

OS Name and Version:	HP Tru64 UNIX V5.1B (Rev. 2650)
Other Software:	--
File System:	UFS
NFS version:	2

Network Subsystem

Network Type:	Jumbo Frame Gigabit
Network Controller Desc.:	PCI to Gigabit Ethernet Controller (DEGXA-TA copper)
Number Networks:	8 (N1-N8)
Number Network Controllers:	8
Protocol Type:	UDP
Switch Type:	1 Extreme Summit 7i
Bridge Type:	N/A
Hub Type:	N/A
Other Network Hardware:	N/A

Server Tuning

Buffer Cache Size:	Dynamic (UBC Cache)
# NFS Processes:	1024 kernel threads
Fileset Size:	1479.5 GB

Disk Subsystem

Number Disk Controllers:	5
Number of Disks:	337
Number of Filesystems:	96 (F1-F96)
File System Creation Ops:	default
File System Config:	default
Disk Controller:	Internal LVD Ultra SCSI controller
# of Controller Type:	1
Number of Disks:	1
Disk Type:	BD0186349B (18GB Ultra SCSI, 10000rpm)
File Systems on Disks:	OS, swap
Special Config Notes:	OS (partitions A & G), Swap (partition B)
Disk Controller:	PCI to FC Controller (DS-KGPSA-DA) (2Gb)
# of Controller Type:	4 (2 pairs)
Number of Disks:	336
Disk Type:	238590-B21 (36GB, 10000 RPM FC-AL)
File Systems on Disks:	F1-F96
Special Config Notes:	See Other notes

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Load Generator (LG) Configuration

Number of Load Generators:	16
Number of Processes per LG:	96
Biod Max Read Setting:	6
Biod Max Write Setting:	6
LG Type:	LG1
LG Model:	HP AlphaServer DS25 Model 68/1000
Number and Type Processors:	2 1000MHz 21264C
Memory Size:	4GB
Operating System:	HP Tru64 UNIX V5.1B (Rev. 2650) (see Other notes)
Compiler:	cc
Compiler Options:	-arch ev67 -O3
Network Type:	PCI to Gigabit Ethernet Controller (DEGXA-TA copper)

Testbed Configuration

LG #	LG Type	Network	Target File Systems	Notes
1,2	LG1	N1	F1..F96	
3,4	LG1	N2	F1..F96	
5,6	LG1	N3	F1..F96	
7,8	LG1	N4	F1..F96	
9,10	LG1	N5	F1..F96	
11,12	LG1	N6	F1..F96	
13,14	LG1	N7	F1..F96	
15,16	LG1	N8	F1..F96	

Notes/Tuning Information

Other Notes
-
-- 8 PCI/PCI-X I/O Expansion drawers each with 1 Network card and 1 (2Gb mode)
-- DS-KGPSA-DA host adapter. 2 Compaq Storageworks San Switch 2/16-EL
-- switches 4 host adaptors connected to each switch. 1 ISL between switches.
-- Switches connect to 2 HSV110 Enterprise Virtual HSV Array's model 2C12D
-- running V2.002 in 2Gb mode. There are 4 ports per HSV110; half connected
-- to each SAN switch. Each HSV110 connects to 12 Fiber shelves through 2
-- FC-AL fiber loops. Each shelf has 14 drives. Each HSV110 controller pair
-- configures all 168 disks into 1 Disk Group. Each of the 96 (48 per HSV110)
-- LUNs (Virtual disk) are 24GB RAID 0. Stripe width controlled by HSV110.
-- Mirrored Writeback cache is disabled. All host adaptors access all LUNs.
-
-SERVER System Tuning: Dynamic via /etc/sysconfigtab subsystem: param=val
-- vfs: bufcache= 20 (19.2 GB), buffer_hash_size= 524287
-- vfs: max_vnodes= 12000000, min_free_vnodes= 9000000
-- vfs: vnode_deallocation_enable= 0, name_cache_hash_size= 524288
-- ufs: inode_hash_size=8388608
-- vm: vm-swap-eager=0
-- generic: locktype=0
-- Kernel Image tuning via dbx debugger:
--- nfs_ufs_lbolt= 0
-
-CLIENT Tuning
-- Kernel Build options:
--- options MICRO_TIME
-- System Tuning: Dynamic via /etc/sysconfigtab subsystem: param=val
--- vm: vm-swap-eager=0
-
-OPERATING SYSTEM NOTES:
-- Server and Clients have 5.1B Inaugural Patch Kit 1 installed plus
-- Early Release Patch t64v51bb1-c0003000-16672-e-20030130