SPECsfs97 Result

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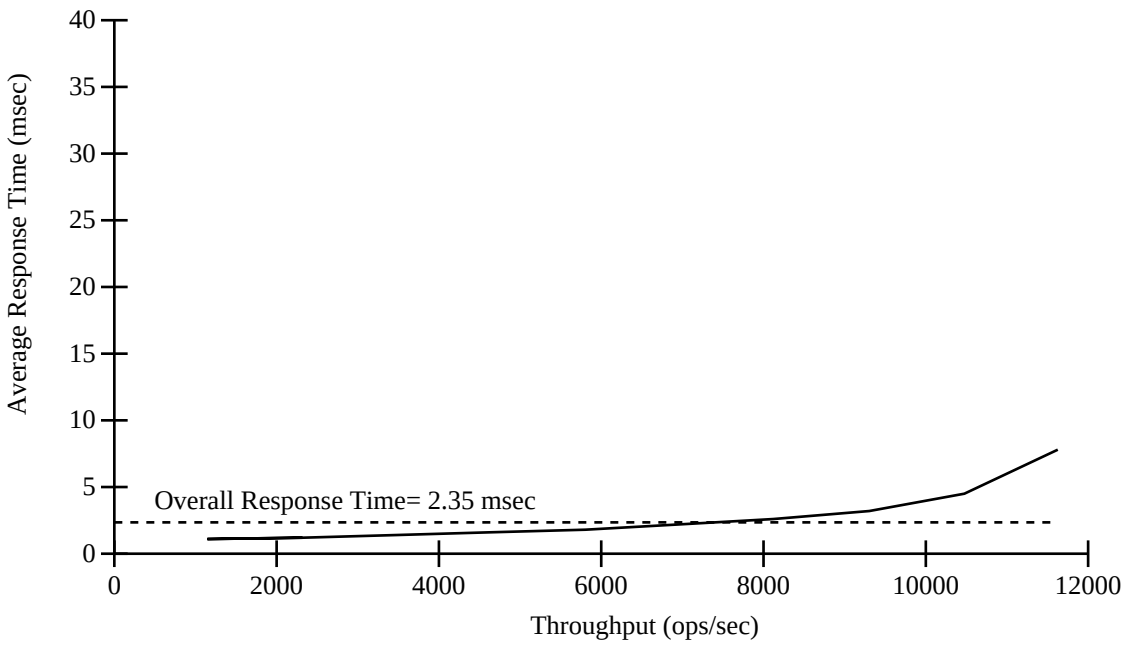
VERITAS Software Corp.
VERITAS ServPoint NAS 1.2 HA (Failover Cluster)

SPECsfs97_R1.v3 =
11626 Ops/Sec (Overall Response Time = 2.35 msec)

Tested:	By:	License #:	Hardware Avail:	Software Avail:
December 2001	VERITAS Software Corp.	65	June 2001	September 2001

Throughput (ops/sec)	Average Response (msec)
1147	1.1
2317	1.2
3472	1.4
4602	1.6
5804	1.8
6971	2.2
8120	2.6
9303	3.2
10475	4.5
11626	**7.8**



CPU, Memory and Power

Model Name:	VERITAS ServPoint NAS 1.2 HA (Failover Cluster)
Processor:	750 MHz UltraSPARC-III
# of Processors:	4 (2 per node)
Primary Cache:	32KBI+64KBD on chip
Secondary Cache:	8MB(I+D) off chip
Other Cache:	N/A
UPS:	N/A
Other Hardware:	Brocade Silkworm 2800
Memory Size:	4 GB (2 GB per node)
NVRAM Size:	8192MB (1024MB per Sun StorEdge T3B controller)
NVRAM Type:	Sun StorEdge T3B write cache
NVRAM Description:	auto-sensing WB/WT depending on battery charge

Server Software

OS Name and Version:	Solaris 8 4/01
Other Software:	VERITAS ServPoint Appliance Software for NAS 1.2 HA
File System:	VxFS
NFS version:	3

Network Subsystem

Network Type:	Gigabit Ethernet
Network Controller Desc.:	Sun Gigabit Ethernet PCI adapter 2.0
Number Networks:	1 (N1)
Number Network Controllers:	2 (1 per node)
Protocol Type:	TCP
Switch Type:	Cisco 3500XL Switch
Bridge Type:	N/A
Hub Type:	N/A
Other Network Hardware:	N/A

Server Tuning

Buffer Cache Size:	Dynamic
# NFS Processes:	2400 (1200 per node)
Fileset Size:	111.2 GB

Disk Subsystem

Number Disk Controllers:	6
Number of Disks:	74
Number of Filesystems:	8 (F1-F8)
File System Creation Ops:	-F vxfs -o bsize=1024,logsize=16384
File System Config:	default
Disk Controller:	On-board FC-AL
# of Controller Type:	2 (1 per node)
Number of Disks:	2 (1 per node)
Disk Type:	Seagate Cheetah 36GB 10K RPM
File Systems on Disks:	OS, swap
Special Config Notes:	N/A
Disk Controller:	QLogic 2200
# of Controller Type:	4 (2 per node)
Number of Disks:	72
Disk Type:	Seagate Cheetah 18GB 10K RPM
File Systems on Disks:	F1-4, F5-8
Special Config Notes:	Filesystem on RAID5 LUNs (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:	11
Number of Processes per LG:	8
Biod Max Read Setting:	3
Biod Max Write Setting:	3
LG Type:	LG1
LG Model:	Sun Netra T1
Number and Type Processors:	1 x 440 MHz UltraSPARC
Memory Size:	256 MB
Operating System:	Solaris 7
Compiler:	Used SPEC-supplied precompiled binaries
Compiler Options:	N/A
Network Type:	On-board 100BASE-T

Testbed Configuration

LG #	LG Type	Network	Target File Systems	Notes
1-11	LG1	N1	/F1-8, /F1-8, /F1-8, ...	N/A

Notes/Tuning Information

Other Notes
-Benchmarked on two Sun Microsystems Sun Fire 280R
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-The system benchmarked was a failover cluster of two nodes. Each node was
-the primary controller of four file systems, but the disks were dual attached
-and could be controlled by the other node in the event of a failure of the
-primary node. The F1, F3, F5, and F7 file systems were controlled by the
-first node. The F2, F4, F6, and F8 file systems were controlled by the
-second node.
-
-2 FC-AL loops per node each connects to 4 Sun StorEdge T3B via a Brocade
-SilkWorm 2800. Each Sun StorEdge T3B consists of 9 disks configured as one
-RAID 5 LUN.
-T3B settings: 16K blk_sz, rd_ahead off, 8+1 RAID 5
-One filesystem per T3B
-
-ncsize = 30000
-
-Network Tuning:
-tcp_xmit_hiwat = 65536
-tcp_recv_hiwat = 65536
-
-The high water mark of "NFS Processes" (kernel threads) was set by starting
-the NFS daemon with the command "/usr/lib/nfs/nfsd -a 1200."
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