SPECweb99 Result

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Compaq Computer Corp.: Compaq Proliant ML370 G2
Red Hat: TUX 2.0

SPECweb99 = 3249

Test Date: Jun-2001
Tester: Compaq

Hardware Avail:	Jun-2001	OS Avail:	Apr-2001	HTTP Software Avail:	Jun-2001	Sup. Software Avail:	Jun-2001	SPEC license #:	2

Hardware

Vendor:	Compaq Computer Corp.
Model:	Compaq Proliant ML370 G2
Processor:	1.13GHz Intel Pentium III
# Processors:	2 cores, 2 chips, 1 core/chip
Primary Cache:	16KBI+16KBD on chip
Secondary Cache:	512KB
Other Cache:	None
Memory:	5 GB
Disk Subsystem:	6 18.2GB 10K RPM Ultra3 SCSI
Disk Controllers:	COMPAQ Smart Array 5i
Other Hardware:	Anritsu MultiFlow 5128 Switch

Software

Operating System:	Red Hat Linux 7.1
File System:	ext2
Other Software:	None

HTTP Software

Vendor:	Red Hat
HTTP Software:	TUX 2.0
API:	TUX user API
Server Cache:	None
Log Mode:	Binary CLF

Test Sponsor

Test Date:	Jun-2001
Tested By:	Compaq
SPEC License:	2

Network

# of Controllers:	4
Network Controllers:	Alteon AceNIC 1000SX
# of Nets:	4
Type of Nets:	Gigabit Ethernet
Network Speed:	1 Gb/s
MSL (sec):	30 (Non RFC1122)
Time-Wait (sec):	60 (Non RFC1122)
MTU:	1500

Clients

# of Clients:	16
Model:	Compaq Proliant DL380
Processor:	1.0GHz Intel Pentium III
# of Processors:	2
Memory:	128MB
Network Controller:	Alteon ACENIC 1000SX
Operating System:	Red Hat 7.0
Compiler:	gcc 2.96

Notes/Tuning Information

SUT Notes

1 disk for OS and logs
5 disks Hardware RAID0 for fileset

Operating System Notes

Tuning parameters:
ulimit -n 10000, set number of open files to 10000, default 8192
net.core.optmem_max=10000000, maximum amount of option memory buffers, default 10240
net.core.rmem_max=10000000, maximum receive socket buffer size, default 65535
net.core.rmem_max=10000000, maximum receive socket buffer size, default 131071
net.core.wmem_default=10000000, default send socket buffer size, default 65535
net.core.wmem_max=10000000, maximum send socket buffer size, default 131071
net.core.hot_list_length=10000, maximm number of skb-heads to be cached, default 128
net.core.netdev_max_backlog=300000, number of unprocessed input packets before the kernel starts dropping them, default 300
net.ipv4.tcp_max_tw_buckets=2000000, set TCP time-wait buckets pool size, default 180000
net.ipv4.tcp_rmem=30000000 30000000 30000000, maximum TCP read-buffer space allocatable, default 4096 87380 174760
net.ipv4.tcp_wmem=30000000 30000000 30000000, maximum TCP write-buffer space allocatable, default 4096 16384 131072
net.ipv4.tcp_mem=30000000 30000000 30000000, maximum TCP buffer space allocatable, default 195584 196096 196608
net.ipv4.tcp_timestamps=0, turns TCP timestamp support off, default on

HTTP Software Notes

net.tux.cgiroot=/, cgi root check; default /var/www/tux/cgiroot/
net.tux.cgi_uid=99, userid for cgi scripts; default -1
net.tux.cgi_gid=99, groupid for cgi scripts; default -1
net.tux.mode_allowed=255, allowed file permission bits, default 4
net.tux.mode_forbidden=2, forbidden file permission bits, default 0
net.tux.documentroot=/www, document root for web server, default /var/www/tux
net.tux.logging=1, enable logging, default off

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Notes/Tuning Information (Continued)

HTTP Software Notes (Continued)

net.tux.0.listen.0=836664f5, tie NIC to first TUX thread, default 0
net.tux.1.listen.0=836764f5, tie NIC to second TUX thread, default 0
net.tux.1.listen.1=836564f5, tie NIC to second TUX thread, default 0

Network Notes

txqueuelen=20000, transmit queue length, default 100
irq.5.smp_affinity=01, lock IRQ of NIC to first processor, default 0xffffffff
irq.11.smp_affinity=02, lock IRQ of NIC to second processor, default 0xffffffff
irq.15.smp_affinity=02, lock IRQ of NIC to second processor, default 0xffffffff
Alteon NIC settings in /usr/src/linux/drivers/net/acenic.c
tx_coal_tick = 300, default 400
rx_coal_tick = 300, default 120
max_tx_desc = 64, default 60
max_rx_desc = 32, default 25