SPECweb99 Result

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Hewlett-Packard Company: ProLiant BL40p
Red Hat: RHCA 2.2

SPECweb99 = 5751

Test Date: Aug-2003
Tester: Hewlett-Packard Company

Hardware Avail:	Jul-2003	OS Avail:	Jul-2003	HTTP Software Avail:	Aug-2003	Sup. Software Avail:	Sept-2003	SPEC license #:	3

Hardware

Vendor:	Hewlett-Packard Company
Model:	ProLiant BL40p
Processor:	2.80GHz Intel Xeon
# Processors:	2 cores, 2 chips, 1 core/chip
Primary Cache:	0K micro-ops I + 8KBD
Secondary Cache:	512KB(I+D) on chip
Other Cache:	2MB(I+D) on chip L3
Memory:	12GB
Disk Subsystem:	2x36.4GB SCSI (15K rpm) (1 Hardware RAID 0 drive)
Disk Controllers:	HP Smart Array 5i Plus
Other Hardware:	Anritsu MultiFlow 5128 Switch

Software

Operating System:	Red Hat Linux 8.0
File System:	ext2
Other Software:	None

HTTP Software

Vendor:	Red Hat
HTTP Software:	RHCA 2.2
API:	RHCA user API
Server Cache:	None
Log Mode:	Binary CLF

Test Sponsor

Test Date:	Aug-2003
Tested By:	Hewlett-Packard Company
SPEC License:	3

Network

# of Controllers:	4
Network Controllers:	4 Integrated NC7781
# 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:	12
Model:	Compaq ProLiant DL380
Processor:	1.0GHz Intel Pentium III
# of Processors:	2
Memory:	128MB
Network Controller:	Alteon ACENIC 1000SX
Operating System:	Red Hat 7.3
Compiler:	gcc 2.96

Notes/Tuning Information

SUT Notes

HP ProLiant BL40p System ROM: I02 07/25/2003
HP Smart Array 5i Plus Firmware: 2.38
Disk Controller Cache set to 100% write, default 50% read and 50% write
1 partition for OS and logs
1 partition 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_default=131071, default receive socket buffer size, default 65535
net.core.rmem_max=131071, 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=300000, maximm number of skb-heads to be cached, default 128
net.core.netdev_max_backlog=300000, number of unprocessed input packets before 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=10000000 10000000 10000000, maximum TCP read-buffer space allocatable, default 4096 87380 174760
net.ipv4.tcp_wmem=10000000 10000000 10000000, maximum TCP write-buffer space allocatable, default 4096 16384 131072
net.ipv4.tcp_mem=10000000 10000000 10000000, 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

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Notes/Tuning Information (Continued)

HTTP Software Notes (Continued)

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=/web, document root for web server, default /var/www/tux
net.tux.logging=1, enable logging, default off

HTTP API Notes

Compiled with gcc 3.2 20020903 (Red Hat Linux 8.0 3.2-7)
-fomit-frame-pointer -mcpu=i686 -march=i686 -O2 -Wall -fPIC
-fomit-frame-pointer -mcpu=i686 -march=i686 -O2 -Wall -shared
Flag description in HP-20030317-APIFlags.txt

Network Notes

txqueuelen=20000, transmit queue length, default 100
1 NIC tied to each TUX thread
Broadcom Gigabit Ethernet Driver bcm5700 ver. 6.0.2d (02/14/03)
bcm5700 options tx_pkt_desc_cnt=45,45,45,45,45 rx_std_desc_cnt=45,45,45,45,45

Client Notes

net.ipv4.ip_local_range=1024 65535

Other Notes

Tuning Disclosure: See Above
Dynamic API: HP-20030303-RHCA.tar.gz
Kernel config: HP-20030428-DL360G3.config.txt