SPECweb99 Result

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Hewlett-Packard Company: HP ProLiant DL580 G2
Red Hat: RHCA 3.2.14-1

SPECweb99 = 8500

Test Date: Aug-2004
Tester: Hewlett-Packard Company

Hardware Avail:	OS Avail:	HTTP Software Avail:	Sup. Software Avail:	SPEC license #:
Jul-2004	Jul-2004	Jul-2004	Jul-2004	3

Hardware

Vendor:	Hewlett-Packard Company
Model:	HP ProLiant DL580 G2
Processor:	3000MHz Intel Xeon
# Processors:	4 cores, 4 chips, 1 core/chip
Primary Cache:	12K micro-ops I + 8KBD on chip
Secondary Cache:	512KB(I+D) on chip
Other Cache:	4096KB(I+D) on chip L3
Memory:	32GB
Disk Subsystem:	4x146GB SCSI (15K rpm) (1 Hardware RAID 0 drive) 28x36.4GB SCSI (15K rpm) (1 Hardware RAID 0 drive)
Disk Controllers:	HP Smart Array 5i Plus HP Smart Array 6402
Other Hardware:	HP ProCurve 2848

Software

Operating System:	Red Hat Linux Enterprise Server 3.0 Update 2
File System:	ext2
Other Software:	None

HTTP Software

Vendor:	Red Hat
HTTP Software:	RHCA 3.2.14-1
API:	RHCA user API
Server Cache:	None
Log Mode:	Binary CLF

Test Sponsor

Test Date:	Aug-2004
Tested By:	Hewlett-Packard Company
SPEC License:	3

Network

# of Controllers:	4
Network Controllers:	4 NC7170
# of Nets:	8
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:	HP ProLiant DL360 G3
Processor:	3.06GHz Intel Pentium III
# of Processors:	2 cores, 2 chips, 1 core/chip
Memory:	512MB
Network Controller:	2 Integrated NC7781
Operating System:	Red Hat Linux Enterprise Server 3.0 Update 1
Compiler:	gcc 3.23

Notes/Tuning Information

SUT Notes

Hyper-Threading enabled
HP Proliat DL580 G2 - System ROM: P27 05/02/2004
HP Smart Array 5i Plus Firmware: 2.58
1 partition for OS and logs
Disk Controller Cache set to 100% write, default 50% read and 50% write
HP Smart Array 6402 Firmware: 1.92
Disk Controller Cache option: 256MB
Disk Controller Cache set to 100% read, default 50% read and 50% write
1 partition for fileset

Operating System Notes

Tuning parameters:
ulimit -n 10000, set number of open files to 10000, default 8192
net.core.hot_list_length=300000, maximm number of skb-heads to be cached, default 128
net.ipv4.tcp_max_tw_buckets=2000000, set TCP time-wait buckets pool size, default 180000
net.ipv4.ip_nonlocal_bind = 1, allows processes to bind to non-local IP adresses
net.ipv4.tcp_sack = 0, turn SACK support off, default on
net.ipv4.tcp_window_scaling = 0, turn TCP window scaling support off, default on
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

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Notes/Tuning Information (Continued)

Operating System Notes (Continued)

net.core.netdev_max_backlog=300000, number of unprocessed input packets before kernel starts dropping them, default 300
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
timer irq tied to CPU4 & CPU5
cciss0 irq tied to CPU4
cciss1 irq tied to CPU5

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=/web, document root for web server, default /var/www/tux
net.tux.logging=1, enable logging, default off
net.tux.max_backlog = 3000, maximum per-listening-socket TCP backlog size, default 2048
net.tux.generate_last_mod = 0
net.tux.generate_etags = 0

HTTP API Notes

Dynamic API: HP-20040724.zip
Flag description in HP-20030317-APIFlags.txt

Network Notes

txqueuelen=20000, transmit queue length, default 100
1 NIC irq tied to one processor

Client Notes

net.ipv4.ip_local_range=1024 65535
The alternate performance neutral source "specweb99_1.02_virtual_client" was used
Virtual clients per client machine used: 1

Other Notes

Tuning Disclosure: See Above
The alternate performance neutral manager "manager.rcp" was used