SPECweb99 Result

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Hewlett-Packard Company: ProLiant DL360 G3
Red Hat: RHCA 2.2

SPECweb99 = 4992

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

Hardware Avail:	May-2003	OS Avail:	Nov-2002	HTTP Software Avail:	Nov-2002	Sup. Software Avail:	Nov-2002	SPEC license #:	3

Hardware

Vendor:	Hewlett-Packard Company
Model:	ProLiant DL360 G3
Processor:	3060MHz Intel Xeon
# Processors:	2 cores, 2 chips, 1 core/chip
Primary Cache:	12KBI+8KBD on chip
Secondary Cache:	512KB
Other Cache:	None
Memory:	8 GB
Disk Subsystem:	2x36.4GB SCSI (15K rpm) (1 logical HW Raid 0 drive)
Disk Controllers:	HP Smart Array 5i+ Controller
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:	Mar-2003
Tested By:	Hewlett-Packard Company
SPEC License:	3

Network

# of Controllers:	4
Network Controllers:	2 Integrated NC7781, 2 Intel Pro/1000 MT Server Adapter
# 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

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 1024
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
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

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Notes/Tuning Information (Continued)

HTTP Software Notes (Continued)

net.tux.logging=1, enable logging, default off
net.tux.max_backlog=3000,maximum per-listening-socket TCP backlog size, default 2048
net.tux.noid=1, suppress the Server id string, default 0
net.tux.generate_etags=0, don't generate ETag header, default 1
net.tux.generate_last_mod=0, don't generate Last-Modified header, default 0

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 descriptions in HP-20030317-APIFlags.txt

Network Notes

txqueuelen=20000, transmit queue length, default 100
1 NIC tied to each TUX thread

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