SPECweb99 Result

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Compaq: ProLiant DL320
Red Hat: TUX 2.0

SPECweb99 = 1438

Test Date: Jan-2001
Tester: Compaq

Hardware Avail:	Dec-2000	OS Avail:	Jan-2001	HTTP Software Avail:	Jan-2001	Sup. Software Avail:	Jan-2001	SPEC license #:	2

Hardware

Vendor:	Compaq
Model:	ProLiant DL320
Processor:	Intel Pentium III EB 800MHz
# Processors:	1 core, 1 chip, 1 core/chip
Primary Cache:	16KBI+16KBD on chip
Secondary Cache:	256KB(I+D) off chip
Other Cache:	none
Memory:	2 GB
Disk Subsystem:	2x 9.1GB Ultra2 SCSI
Disk Controllers:	Integrated Ultra-SCSI2 Controller
Other Hardware:	1 X ALTEON ACEswitch 180 GbE Switch

Software

Operating System:	Red Hat Linux 7.0
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:	Jan-2001
Tested By:	Compaq
SPEC License:	2

Network

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

Clients

# of Clients:	5
Model:	Compaq ProLiant DL 320
Processor:	Intel Pentium III EB 1000MHz
# of Processors:	2
Memory:	128MB
Network Controller:	Alteon ACEnic 1000-SX
Operating System:	Windows 2000 Professional sp1
Compiler:	Microsoft Visual C++ 6.0

Notes/Tuning Information

SUT Notes

1st disk 1st partition for OS
2nd disk 1st partition for Logs
2 disk software RAID0 on 2nd partitions for Data

Operating System Notes

ulimit -n 10000, set number of open files to 10000, default 1024
net.core.wmem_max = 10000000, maximum send socket buffer size, default 131071
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.rmem_default = 10000000, default receive socket buffer size, default 65535
net.core.optmem_max = 10000000, maximum amount of option memory buffers, default 10240
net.core.hot_list_length = 10000, maximum number of skb-heads to be cached, default 128
net.ipv4.tcp_timestamps = 0, turns TCP timestamp support off, default 1
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 31744 32256 32768
net.ipv4.tcp_dsack = 1
net.ipv4.tcp_fack = 1
net.ipv4.tcp_retrans_collapse = 1
net.ipv4.tcp_sack = 1
net.ipv4.tcp_window_scaling = 1
net.ipv4.tcp_nonlocal_bind = 1, allow nonlocal IP addresses, default 0
kernel.panic = 0, reboot timeout in seconds, default
slabinfo = size-$N 250 120 where N in 32768 16384 8192 4096 2048 1024 512 256 128 64 32 per-CPU SLAB pool, defaults 124 62
mount /home, /, and /logs ext2 filesystems with noatime and nocheck options

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Notes/Tuning Information (Continued)

HTTP Software Notes

net.tux.max_keepalive_bw = 0
net.tux.cgiroot = /, cgi root check, default /var/www/tux/cgiroot/
net.tux.mode_cgi = 32841, permission check bits, default 36160
net.tux.0.listen.0 = 0
net.tux.mode_allowed = 255, allowed filsystem bits, default 4
net.tux.mode_forbidden = 2, forbidden filesystem bits, default 0000
net.tux.Dprintk = 0, debugging off
net.tux.clientport = 8080, apache backup webserver listen port, this is default
net.tux.serverport = 80, TUX listen port, this is default
net.tux.documentroot = /home/spec, Document root for web server, default /var/www/tux
net.tux.threads = 1, only start one TUX primary thread, default 2
net.tux.logging = 1, enable logging, default 0
net.tux.logfile = /logs/http, name of log file, default /var/log/tux
net.tux.ack_pingpong = 1
net.tux.nonagle = 2
net.tux.push_all = 0
net.tux.zerocopy_parse = 1

Network Notes

txqueuelen = 10000, Transmit queue length, default 100