SPECweb99 Result

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Dell: PowerEdge 6400/700
Red Hat: TUX 1.0

SPECweb99 = 4200

Test Date: Jun-2000
Tester: Dell

Hardware Avail:	Jun-2000	OS Avail:	Sep-2000	HTTP Software Avail:	Sep-2000	Sup. Software Avail:	Sep-2000	SPEC license #:	55

Hardware

Vendor:	Dell
Model:	PowerEdge 6400/700
Processor:	700MHz Pentium III Xeon
# Processors:	4 cores, 4 chips, 1 core/chip
Primary Cache:	16KBI+16KBD on chip
Secondary Cache:	2MB(I+D)
Other Cache:	None
Memory:	8 GB
Disk Subsystem:	5 9GB 10KRPM drives
Disk Controllers:	Onboard Adaptec AIC-7899 SCSI
Other Hardware:	4 Alteon ACEswitch 180

Software

Operating System:	Red Hat Linux 6.2 Threaded Web Server Add-On
File System:	ext2
Other Software:	None

HTTP Software

Vendor:	Red Hat
HTTP Software:	TUX 1.0
API:	TUX user API
Server Cache:	None
Log Mode:	Binary CLF

Test Sponsor

Test Date:	Jun-2000
Tested By:	Dell
SPEC License:	55

Network

# of Controllers:	4
Network Controllers:	Alteon AceNIC 1000SX
# of Nets:	4
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:	20
Model:	Dell Precision 410
Processor:	450MHz Pentium II
# of Processors:	2
Memory:	128MB
Network Controller:	Alteon AceNIC 1000SX
Operating System:	Windows 2000 Professional
Compiler:	Microsoft Visual C++ 6.0

Notes/Tuning Information

SUT Notes

1 disk for OS and logs
4 disk software RAID0 stripe, using 2MB chunk size, for fileset.

Operating System Notes

net.ipv4.ip_forward = 0, disables packet forwarding, default 1
net.ipv4.conf.all.rp_filter = 1, enables source route verification, default 0
net.ipv4.tcp_timestamps = 0, turns TCP timestamp support off, default on
net.ipv4.tcp_sack = 0, turns SACK support off, default on
net.ipv4.tcp_window_scaling = 0, turn TCP window scaling support off, default on
net.ipv4.tcp_max_tw_buckets = 2000000, sets TCP time-wait buckets pool size, default 180000
net.ipv4.ip_local_port_range = 16384 65536, default 32768 61000
net.core.rmem_max = 10485760, maximum receive socket buffer size, default 65535
net.core.wmem_max = 10485760, maximum send socket buffer size, default 65535
net.core.rmem_default = 10485760, default receive socket buffer size, default 65535
net.core.wmem_default = 10485760, default send socket buffer size, default 65535
fs.file-max = 40960, maximum number of open files, default 8192
vm.bdflush = 100 5000 640 2560 150 30000 5000 1884 2 (see tuning description file)
vm.freepages = 16384 32768 65536 (see tuning description file)
Alteon tx_coal_tick = 300, default 0 (not set)
Alteon rx_coal_tick = 300, default 0 (not set)
See .config file for kernel build information
Tested TUX version based on 2.3 kernel, released version based on 2.4 kernel

Client Notes

Tcpip/Parameters/MaxUserPort = 0xfffe, sets maximum open ports to 65534.

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Notes/Tuning Information (Continued)

Other Notes

TUX Configuration:
Each NIC IRQ bound to a different CPU.
Each TUX thread's listening address bound to 1 NIC's associated network
net.tux.threads = 4, sets number of TUX threads, default 2
net.tux.logging = 1, turns on logging of requests, default 0
net.tux.logentry_align_order = 0, sets alignment of log entry records in logfile, default 5
net.tux.mode_allowed = 255, allowed file-permission bits, default 00004
net.tux.mode_forbidden = 2, forbidden file-permission bits, default 00000
net.tux.max_cached_filesize = 100000000, maximum size of cached object, default 100000
net.tux.serverport = 80
net.tux.max_backlog = 3000, maximum per-listening-socket TCP backlog size, default 2048