SPECweb99 Result

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Advanced Micro Devices: Tyan Thunder K7/Athlon MP 2200+
Red Hat: Red Hat Content Accelerator 2

SPECweb99 = 2840

Test Date: Jul-2002
Tester: Advanced Micro Devices

Hardware Avail:	Aug-2002	OS Avail:	Oct-2001	HTTP Software Avail:	Feb-2002	Sup. Software Avail:	Feb-2002	SPEC license #:	49

Hardware

Vendor:	Advanced Micro Devices
Model:	Tyan Thunder K7/Athlon MP 2200+
Processor:	AMD Athlon MP 2200+, 1.8 GHz
# Processors:	2 cores, 2 chips, 1 core/chip
Primary Cache:	64KBI+64KBD on chip
Secondary Cache:	256KB
Other Cache:	none
Memory:	3 GB pc2100 DDR
Disk Subsystem:	4: 18GB 15K Ultra160 SCSI
Disk Controllers:	LSI Logic Elite 1600
Other Hardware:	1 Extreme Summit 7i, 2 Dell PowerConnect 5012 Gigabit Switches

Software

Operating System:	Red Hat Linux 7.2
File System:	ext2
Other Software:	Intel 4.1.7 driver

HTTP Software

Vendor:	Red Hat
HTTP Software:	Red Hat Content Accelerator 2
API:	RHCA API
Server Cache:	None
Log Mode:	Binary CLF

Test Sponsor

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Network

# of Controllers:	2
Network Controllers:	Intel Gigabit Pro 1000XT
# of Nets:	2
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:	6
Model:	Dell PE1400
Processor:	Intel Pentium III 800MHz
# of Processors:	2
Memory:	256MB
Network Controller:	Intel Gigabit Pro 1000F
Operating System:	Windows 2000 Professional
Compiler:	Microsoft Visual C++ 6.0

Notes/Tuning Information

SUT Notes

1 disk for OS/logs, 3 disks for web pages.

Operating System Notes

One NIC bound per CPU.
Each NIC's TX queue length set to 1000 via ifconfig, default 100.
File systems mounted with "noatime,nodiratime", no inode access time updating.
net.ipv4.nonlocal_bind = 1, allows processes to bind to non-local IP adresses.
net.ipv4.tcp_timestamps = 0, turns TCP timestamp support off, default on.
net.ipv4.tcp_max_tw_buckets = 2000000, sets TCP time-wait buckets pool size, default 180000.
net.ipv4.tcp_rmem = 10000000 10000000 10000000, sets min/default/max TCP read buffer, default 4096 87380 174760.
net.ipv4.tcp_wmem = 10000000 10000000 10000000, sets min/pressure/max TCP write buffer, default 4096 16384 131072.
net.ipv4.tcp_mem = 10000000 10000000 10000000, sets min/pressure/max TCP buffer space, default 31744 32256 32768.
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.hot_list_length = 300000, maximum number of skb-heads to be cached, default 128.
net.core.rmem_max = 10000000, maximum receive socket buffer size, default 131071.
net.core.wmem_max = 10000000, maximum send socket buffer size, default 131071.
net.core.rmem_default = 10000000, default receive socket buffer size, default 65535.
net.core.wmem_default = 10000000, default send socket buffer size, default 65535.
net.core.optmem_max = 10000000, maximum amount of option memory buffers, default 10240.
net.core.netdev_max_backlog = 300000, number of unprocessed input packets before kernel starts dropping them, default 300.

HTTP Software Notes

net.tux.cgiroot = /, cgi root check, default /var/www/tux/cgiroot/
net.tux.max_backlog = 3000, maximum per-listening-socket TCP backlog size, default 2048

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Notes/Tuning Information (Continued)

HTTP Software Notes (Continued)

net.tux.noid = 1, suppress the Server id string, default 0.

Other Notes

Dynamic API: Dell-20020204-RHCA.tar.gz
Kernel configuration: .config in AMD-20020711.zip
Tuning Disclosure: See above.
SUT requires a Tyan Thunder K7 Motherboard, an ATX 4hd capable case and a Delta DPS-465AB power supply.