SPECweb99 Result

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Advanced Micro Devices: Tyan Thunder K7/Athlon MP 2100+
Red Hat: Red Hat Content Accelerator 2

SPECweb99 = 2622

Test Date: Jun-2002
Tester: Advanced Micro Devices

Hardware Avail:	Jun-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 2100+
Processor:	AMD Athlon MP 2100+, 1.73 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 Gigabit Switch

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

Test Date:	Jun-2002
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Network

# of Controllers:	2
Network Controllers:	Intel Gigabit Pro 1000F
# 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.
ulimit -n 10000, sets number of open files, default 1024.
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.logging = 1, turns on logging of requests, default 0
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

Tuning Disclosure: See above.
Kernel configuration: .config in AMD-20020611.zip
SUT requires a Tyan Thunder K7 Motherboard, an ATX 4hd capable case and a Delta DPS-465AB power supply.