SPECweb99 Result

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IBM: IBM eServer xSeries 343
Red Hat: TUX 2.0

SPECweb99 = 3416

Test Date: Mar-2002
Tester: IBM

Hardware Avail:	Apr-2002	OS Avail:	Apr-2001	HTTP Software Avail:	Apr-2001	Sup. Software Avail:	Jan-2002	SPEC license #:	11

Hardware

Vendor:	IBM
Model:	IBM eServer xSeries 343
Processor:	1266 MHz Pentium III
# Processors:	2 cores, 2 chips, 1 core/chip
Primary Cache:	16KBI+16KBD on chip
Secondary Cache:	512KB ATC
Other Cache:	none
Memory:	6GB
Disk Subsystem:	10-18GB drives
Disk Controllers:	Onboard Adaptec 7899
Other Hardware:	1 Extreme Networks Summit 7i Switch

Software

Operating System:	Red Hat Linux 7.1
File System:	ext2
Other Software:	Intel 3.6.8 driver

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:	Mar-2002
Tested By:	IBM
SPEC License:	11

Network

# of Controllers:	2
Network Controllers:	Intel PRO/1000 XT
# 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:	10
Model:	IBM eServer xSeries 330
Processor:	933Mhz Pentium III
# of Processors:	1
Memory:	256MB
Network Controller:	IBM Netfinity Gigabit Ethernet Adapter
Operating System:	Windows 2000 Professional
Compiler:	Microsoft Visual C++ 6.0

Notes/Tuning Information

SUT Notes

2 18GB 15K RPM disk for OS
6 18GB 15K RPM disk software RAID0, using 2MB chunk size, for fileset
2 18GB 10K RPM disk software RAID0, using 2MB chunk size, for logs
set noatime on fileset mount; avoids writing back the main inode block for every file accessed

Operating System Notes

net.ipv4.ip_forward=1, default 0
net.ipv4.tcp_timestamps = 0, turns TCP timestamp support off, default 1
net.ipv4.tcp_max_tw_buckets = 2000000, sets TCP time-wait buckets pool size, default 180000
net.core.rmem_max = 10000000, maximum receive socket buffer size, default 65535
net.core.rmem_default = 10000000, default receive socket buffer size, default 65535
net.core.wmem_max = 10000000, maximum send 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.hot_list_length = 300000, maximum 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_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, default 31744 32256 32768
net.ipv4.tcp_dsack = 0
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

HTTP Software Notes

Each TUX thead's listening address bound to a NIC's associated network
One NIC bound per TUX thread
net.tux.logging = 1, turns on logging, default 0

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Notes/Tuning Information (Continued)

HTTP Software Notes (Continued)

net.tux.cgiroot=/, cgi root check, default /var/www/tux/cgiroot/
net.tux.cgi_uid=99, uid 'nobody' for cgi scripts, default -1
net.tux.cgi_gid=99, gid 'nobody' for cgi scripts, default -1
net.tux.mode_allowed = 255, allowed file-permission bits, default 00004
net.tux.mode_forbidden = 2, forbidden file-permission bits, default 00000

Network Notes

txqueuelen=20000, transmit queue length, default 100

Other Notes

Tuning Disclosure: See above.
Dynamic API: Compaq-20010122-DL320-API.tar.gz
Kernel Configuration: IBM-20020318-x343-config.txt