

SPECweb99 Result

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IBM: eServer xSeries 370
Red Hat: TUX 2.0

SPECweb99 = 6248

Test Date: Mar-2001
Tester: IBM

Hardware Avail: Mar-2001 OS Avail: Feb-2001 HTTP Software Avail: Feb-2001 Sup. Software Avail: Feb-2001 SPEC license #: 11

Hardware

Vendor: IBM
Model: eServer xSeries 370
Processor: 900 MHz Pentium III Xeon
Processors: 4 cores, 4 chips, 1 core/chip
Primary Cache: 16KBI+16KBD on chip
Secondary Cache: 2MB
Other Cache: none
Memory: 32GB
Disk Subsystem: 4 X 18GB (IBM 19K1638)
Disk Controllers: Onboard Adaptec
Other Hardware: 8 X ALTEON ACESwitch 180 GbE Switch

Software

Operating System: RedHat Linux 7.0
with Threaded Web Server Add-On
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: Mar-2001
Tested By: IBM
SPEC License: 11

Network

of Controllers: 8
Network Controllers: Alteon ACEnic PCI
of Nets: 8
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: 32
Model: Intellistation Z Pro
Processor: 450Mhz Pentium II Xeon
of Processors: 2
Memory: 256MB
Network Controller: Alteon ACEnic PCI
Operating System: Windows 2000 Professional
Compiler: Microsoft Visual C++ 6.0

Notes/Tuning Information

SUT Notes

- 1 disk for OS
- 3 disk software RAID0, using 2MB chunk size, for web pages and logs

Operating System Notes

- Tuning parameters:
- net.ipv4.ip_forward=1, default 0
 - net.ipv4.conf.all.rp_filter = 1, enables source route verification, 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, default 10240
 - net.core.hot_list_length = 10000, maximum number of skb-heads to be cached, default 128
 - 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.ip_nonlocal_bind = 1, allow nonlocal IP addresses, default 0
- See config file for kernel build information

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Notes/Tuning Information (Continued)

HTTP Software Notes

TUX Configuration

- net.tux.threads = 4, sets number of TUX threads, default 2
- net.tux.logging = 1, turns on logging, default 0
- 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

HTTP API Notes

Tux API from Compaq-20010122-DL320-API.tar.gz