

SPECweb99 Result

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IBM: IBM eServer pSeries 680
Zeus Technology Ltd.: Zeus 3.3.6

SPECweb99 = 7288

Test Date: Aug-2000
Tester: IBM

Hardware Avail: Oct-2000 OS Avail: Oct-2000 HTTP Software Avail: Apr-2000 Sup. Software Avail: Oct-2000 SPEC license #: 11

Hardware

Vendor: IBM
Model: IBM eServer pSeries 680
Processor: 600MHz RS64-IV
Processors: 12 cores, 12 chips, 1 core/chip
Primary Cache: 128KBI+128KBD on chip
Secondary Cache: 16MB(I+D) off chip
Other Cache: None
Memory: 64 GB
Disk Subsystem: 6x9.1GB 16Bit SCSI Disk and 8x18.2GB SSA Disk
Disk Controllers: Wide/Ultra-2 SCSI I/O Controller,
IBM SSA 160 SerialRAID Controller
Other Hardware: 8xAlteon ACESwitch 180

Software

Operating System: AIX 4.3.3 + APAR IY12054
File System: JFS
Other Software: None

HTTP Software

Vendor: Zeus Technology Ltd.
HTTP Software: Zeus 3.3.6
API: ISAPI
Server Cache: See Notes
Log Mode: Common Log Format

Test Sponsor

Test Date: Aug-2000
Tested By: IBM
SPEC License: 11

Network

of Controllers: 12
Network Controllers: 12 Gigabit Ethernet-SX PCI Adapter
of Nets: 12
Type of Nets: Gigabit Ethernet
Network Speed: 1 Gigabit/sec
MSL (sec): 30 (Non RFC1122)
Time-Wait (sec): 60 (Non RFC1122)
MTU: 1500

Clients

of Clients: 36
Model: RS/6000 43P-260
Processor: 200 MHz POWER3
of Processors: 2
Memory: 1024MB
Network Controller: 1 Gigabit Ethernet-SX PCI Adapter
Operating System: AIX 4.3.2
Compiler: IBM Cset++ Version 3.1.3

Notes/Tuning Information

SUT Notes

APAR IY12054: New hardware support for Oct-2000
bosdebug -H (enables secondary thread on the processor)
no(network option) tuning:
no -o send_file duration=180000(cached send_file expiration time, default=300)
no -o somaxconn=8192(max listen backlog, default=1024)
no -o nbc_max_cache=131072(max file size for network buffer cache, default=1048576)
no -o nbc_pseg=20000(max file entries in private segment,default=0)
no -o tcp_timewait=5(ensure that TIME_WAIT is at least 60 seconds, default=1)
Interrupt affinity - bind 12 Ethernet interrupts to 12 cpu's(1 interrupt to 1 cpu)
maxpgahead=80(the maximum number of pages to be read ahead,default=8)
maxfree=560(the number of frames on the free list at which page stealing is to stop,default=488)
minperm=5%(the point below which the page-stealer will steal file of computational pages,default=20%)
maxperm=95%(the point above which the page stealing algorithm steals only file page,default=80%)
Rotate log every 10 minutes
Used 1 external 7017-F/C6321 I/O drawer (3 adapter each).
Used 3 external 7017-F/C6323 I/O drawers (3 adapter each).

HTTP API Notes

Zeus ISAPI interface used for dynamic content
FastCGI used as communication method to manage all the independent CGI processes

Client Notes

no (network option) tuning:
no -o delayack=3(delay ack for connection setup and shutdown,default=0)
no -o delayackports={80}(delay ack ports,default={ })

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Notes/Tuning Information (Continued)

Client Notes (Continued)

no -o tcp_timewait=5(ensure that TIME_WAIT is at least 60 seconds,default=1)

Other Notes

Zeus 3.3.6 tuning:

tuning!bind_any no

tuning!cache_files 25013

tuning!cache_large_file 1048576

tuning!cache_small_file 4096

tuning!cache_stat_expire 180000

tuning!cache_flush_interval 180000

tuning!cache_max_bytes 0

tuning!num_children 25

tuning!keepalive yes

tuning!keepalive_max -1

tuning!listen_queue_size 8192

tuning!cbuff_size 1048576

tuning!multiple_accept yes

tuning!sendfile yes

tuning!sendfile_maxsize 9216

tuning!sendfile_minsize 4096

tuning!sendfile_reservefd 28866

tuning!so_nagle_off no

tuning!so_rbuff_size 16384

tuning!so_wbuff_size 16384

tuning!softservers no

tuning!unique_bind yes

tuning!use_poll yes

tuning!cache_cooling_time 0

tuning!modules!cgi!cleansize 0

tuning!modules!stats!enabled no

tuning!modules!nsapi!enabled no

Zeus_Site_Configuration :

modules!cgi!enabled yes

modules!fastcgi!enabled yes

modules!isapi!enabled yes

bindaddr 8.1.1.99, 8.1.3.99, 8.1.5.99, 8.1.7.99, 8.1.9.99, 8.1.11.99, 8.1.13.99, 8.1.15.99,

8.1.17.99, 8.1.19.99, 8.1.21.99, 8.1.23.99, 8.1.0.99, 8.1.1.99, 8.1.3.99, 8.1.5.99, 8.1.7.99,

8.1.9.99, 8.1.11.99, 8.1.13.99, 8.1.15.99, 8.1.17.99, 8.1.19.99, 8.1.21.99, 8.1.23.99

12 IP addresses bound twice