SPECweb99 Result

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IBM: IBM RS/6000 7044-270
Zeus Technology Ltd.: Zeus 3.3.6

SPECweb99 = 2175

Test Date: Aug-2000
Tester: IBM

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

Hardware

Vendor:	IBM
Model:	IBM RS/6000 7044-270
Processor:	375MHz POWER3-II
# Processors:	4 cores, 4 chips, 1 core/chip
Primary Cache:	32KBI+64KBD on chip
Secondary Cache:	8MB(I+D) off chip
Other Cache:	None
Memory:	16 GB
Disk Subsystem:	
	2x8.7GB 16Bit LVD SCSI Disk
	2x17.4 16Bit LVD SCSI Disk
Disk Controllers:	Wide/Ultra-2 SCSI I/O Controller
Other Hardware:	3 x Alteon ACESwitch 180

Software

Operating System:	AIX 4.3.3 + APAR IY12051
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:	4
Network Controllers:	4 Gigabit Ethernet-SX PCI Adapter
# of Nets:	4
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:	16
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 IY12051: New hardware support for Oct-2000
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=10000(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 4 Ethernet interrupts to 4 cpu's(1 interrupt to 1 cpu)
maxpgahead=64(the maximum number of pages to be read ahead,default=8)
maxfree=184(the number of frames on the free list at which page stealing is to stop,default=128)
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 30 minutes
1 disk for OS and webserver, 2 disks for file_set, and 1 disk for logs
2 switches are chained to handle 3 nets. Another switch handles the 4th net
4 clients per net

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 100003
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 5
tuning!keepalive yes
tuning!listen_queue_size 8192
tuning!cbuff_size 1048576
tuning!multiple_accept yes
tuning!sendfile yes
tuning!sendfile_maxsize 512000
tuning!sendfile_minsize 4096
tuning!sendfile_reservefd 30000
tuning!so_nagle_off no
tuning!so_rbuff_size 65536
tuning!so_wbuff_size 65536
tuning!softservers no
tuning!unique_bind yes
tuning!use_poll yes
tuning!keepalive_max -1
tuning!modules!cgi!cleansize 0
tuning!cache_cooling_time 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 2.1.1.99, 2.1.2.99, 2.1.3.99, 2.1.4.99, 2.1.0.99