SPECweb99_SSL Result

IBM : pSeries 630 Model 6C4 (1000MHz)
Zeus Technology Ltd. : Zeus 4.0r2

NC SPECweb99_SSL

SPEC has determined that this result was not in compliance with the SPECweb99_SSL run and reporting rules. Specifically, the original tester has discovered that performance of the SUT shipped to customers did not achieve same results (within 5%) thus failing to meet the 3-month availability requirement.

New results for this hardware can be found at:
http://www.spec.org/osg/web99ssl/results/res2002q3/web99ssl-20020819-00023.asc

PERFORMANCE

Iteration	Conforming Simultaneous Connections
1	NC
2	NC
3	NC
Median	NC

Availability Dates

All Hardware	Aug-2002
HTTPS Software	Jan-2002
Operating System	Jul-2002
Supplemental System	Jul-2002

Hardware

Vendor	IBM
Model	pSeries 630 Model 6C4 (1000MHz)
Processor	1000MHz POWER4
# Processors	4 cores, 4 chips, 1 core/chip
Primary Cache	64KBI+32KBD on chip
Secondary Cache	1.44MB unified on chip
Other Cache	32MB unified (off chip)/SCM, 2SCM in SUT
Memory	8 GB
Disk Subsystem	11x9.1GB 16Bit SCSI Disk, 1x18.2GB 16bit SCSI Disk, 1x36.4GB 16bit SCSI Disk
Disk Controllers	2 Wide/Ultra-3 SCSI I/O Controllers
Other Hardware	4 x Alteon ACESwitch 180

Software

Operating System	AIX 5L V5.1(64bit)
File System	JFS2
Other Software	None

HTTPS Software

Vendor	Zeus Technology Ltd.
HTTPS Software	Zeus 4.0r2
API	ISAPI
Server Cache	None
Log Mode	Binary CLF for Zeus

Test Sponsor

Test Date	May-2002
Tested By	IBM
SPEC License	11

Network

# of Controllers	4
Network Controllers	4 IBM Gigabit Ethernet-SX PCI Adapter
# of Nets	4
Type of Nets	Gigabit Ethernet
Network Speed	1 Gb/sec
MSL (sec)	30 (Non RFC1122)
Time-Wait (sec)	60 (Non RFC1122)
MTU	1500

Clients

# of Clients	8
Model	IBM eServer pSeries 640 Model B80
Processor	375 MHz POWER3-II
# of Processors	4
Memory	4GB
Network Controller	1 Gigabit Ethernet-SX PCI Adapter
Operating System	AIX 4.3.3
Compiler	IBM Cset++ Version 5.1

Benchmark Configuration

Requested Connections	1050
Fileset Size (MB)	3479.44

Notes/Tuning information

SUT Notes
APAR IY31315 was applied to AIX5L V5.1

bindintcpu [interrupt level] [cpu] (Interrupt affinity - bind 4 Ethernet interrupts to 4 CPU's(1 interrupt to 1 cpu))
bindprocessor [process] [cpu] (Process affinity - bind 4 Zeus child processes to 4 CPU's(1 process to 1 CPU))
maxpgahead=64(the maximum number of pages to be read ahead,default=8)
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%)
4 different logs for 4 zeus instances (1 log per zeus instance) for dynamic requests
Disk layout: 1 disk for OS, 1 disk for webserver, 10 disks striped for file_set,1 disk for weblog
Set Gigabit Ethernet driver attribute copy_bytes=256 (copy packet into contiguous buffer on transmit if this many or less bytes, defult=2048)
Set Gigabit Ethernet driver attribute large_send=yes (turn on large_send capability of TCPIP, default=no)
no(network option) tuning:
no -o tcp_sendspace=131072(default socket send buffer size, default=16384)
no -o tcp_recvspace=65536(default socket receive buffer size, default=16384)
no -o somaxconn=10240(max listen backlog, default=1024)
no -o tcp_timewait=5(ensure that TIME_WAIT is at least 60 seconds, default=1)
no -o tcp_newreno=0 (disables the modification to TCP's Fast Recovery algorithm as described in RFC 2582, default=1)

HTTP API Notes
Zeus PEPP-06 SPECweb99 toolkit used for dynamic content
post.log in /weblog directory instead of doc_root
./Configure --sendfile=no --locking=semop
Compiled with IBM VAC 5.0.1

Client Notes
APAR IY17356 was applied to AIX 4.3.3
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={})
no -o tcp_timewait=5(ensure that TIME_WAIT is at least 60 seconds,default=1)
no -o tcp_sendspace=65536(default socket send buffer size, default=16384)
no -o tcp_recvspace=65536(default socket receive buffer size, default=16384)

Other Notes
Starts 4 unique instances of Zeus sharing a common docroot
The 1 child process of each Zeus instance bind to 1 unique IP address
Zeus 4.0 global.cfg (one per instance)
tuning!bind_any no
tuning!cache_files 100003
tuning!cache_large_file 1048576
tuning!cache_small_file 9216
tuning!cache_stat_expire 180000
tuning!cache_flush_interval 180000
tuning!cache_max_bytes 0
tuning!num_children 1
tuning!keepalive yes
tuning!ssl_keepalive yes
tuning!ssl_diskcache no
tuning!ssl_sessioncache_size 100003
tuning!keepalive_timeout 300
tuning!keepalive_max -1
tuning!listen_queue_size 9216
tuning!cbuff_size 1048576
tuning!multiple_accept yes
tuning!sendfile no
tuning!so_rbuff_size 32768
tuning!softservers no
tuning!unique_bind yes
tuning!use_poll no
tuning!cache_cooling_time 0
tuning!modules!cgi!cleansize 0
tuning!modules!cgi!cbuff_size 921632
tuning!modules!stats!enabled no
tuning!modules!nsapi!enabled no
Zeus_Site_Configuration (one per instance):
modules!cgi!enabled yes
modules!isapi!enabled yes
security!enabled yes
bindaddr ip_addr1
Tuning Disclosure: IBM-20011019.txt
Dynamic API: IBM-20011019_2-API.tar.gz

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Test Run Details

	Run Num	Conforming Connections	Percent Conform	Throughput ops/sec	Response msec	ops/sec/ loadgen	Kbits/ sec
	1	NC	NC	NC	NC	NC	NC
	2	NC	NC	NC	NC	NC	NC
=>	3	NC	NC	NC	NC	NC	NC