SPECweb99_SSL Result

IBM : BladeCenter HS20 Zeus : Zeus V4.1R1	CD SPECweb99_SSL

SPEC has discovered a code defect in the SPECweb99_SSL test harness run on the client systems used in this result. The defect prevents these client systems from generating the correct SPECweb99_SSL workload. Specifically, the defect in the SPECweb99_SSL code results in the clients not generating any of the required SSL ClientKeyExchanges during the benchmark. Therefore, the results presented here are not comparable with any other SPECweb99_SSL results.

PERFORMANCE

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

Availability Dates	
All Hardware	Nov-2002
HTTPS Software	Mar-2002
Operating System	May-2002
Supplemental System	May-2002

Hardware	
Vendor	IBM
Model	BladeCenter HS20
Processor	2.4 GHz Intel Xeon
# Processors	2 cores, 2 chips, 1 core/chip
Primary Cache	12KBI+8KBD on chip
Secondary Cache	256kB L2
Other Cache	512 KB L3
Memory	4 GB
Disk Subsystem	2 x 40GB 5400 RPM IDE
Disk Controllers	OnBoard IDE
Other Hardware	1 x Alteon ACEswitch 180 Ethernet Switch 1 x Extreme Network Summit 7i switch

Software	
Operating System	Red Hat Linux 7.3
File System	Ext. 2
Other Software	None

HTTPS Software	
Vendor	Zeus
HTTPS Software	Zeus V4.1R1
API	Zeus PEPP 0.8 ISAPI used for dynamic content
Server Cache	None
Log Mode	Zeus Binary CLF

Test Sponsor	
Test Date	Dec-2002
Tested By	IBM
SPEC License	11

Network	
# of Controllers	1
Network Controllers	1 On-Board Broadcom Gb ethernet
# of Nets	1
Type of Nets	1
Network Speed	1 Gb/s
MSL (sec)	30 (Non RFC1122)
Time-Wait (sec)	60 (Non RFC1122)
MTU	1500

Clients	
# of Clients	5
Model	IBM xSeries 330
Processor	1.13Ghz Intel Pentium III
# of Processors	1

Memory	256MB
Network Controller	Alteon ACENIC
Operating System	Windows 2000
Compiler	Visual C++ 6.0

Benchmark Configuration

Requested Connections	870
Fileset Size (MB)	2903.6

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Notes/Tuning information

SUT Notes
    1 Disk OS and File Set, 1 Disk Logfiles
    BladeCenter chassis includes:
    - 1 HS20 blade server in single chassis slot
    - 1 4-Port Gb Ethernet Switch Module

Operating System Notes
    Tuning parameters:
    -net.ipv4.ip_forward = 0, default 0
    -net.ipv4.conf.all.rp_filter = 1, enables source route verification, default 0
    -net.core.optmem_max=10000000, default 10240
    -net.core.rmem_default=10000000,default receive socket buffer size, default 65535
    -net.core.rmem_max=10000000, maximum receive socket buffer size, default 65535
    -net.core.wmem_default=10000000, default send socket buffer size, default 65535
    -net.core.wmem_max=10000000, maximum send socket buffer size, default 65535
    -net.core.hot_list_length=10000, maximum number of skb-heads to be cached, default 128
    -net.core.netdev_max_backlog=10000, default 300
    -net.ipv4.tcp_max_tw_buckets=160000, sets TCP time-wait buckets pool size, default 180000
    -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_timestamps=0, turns TCP timestamp support off, default 1

HTTPS Software Notes
    " Zeus Configuration
    -tuning!so_wbuff_size 1048576
    -tuning!softservers no
    -tuning!cbuff_size 65536
    -tuning!ssl_sessioncache_size 2617
    -tuning!keepalive_timeout 20
    -tuning!keepalive_max 3000
    -tuning!sendfile_minsize 1
    -tuning!listen_queue_size 8192
    -tuning!so_rbuff_size 0
    -tuning!modules!cgi!cleansize 0
    -tuning!clientfirst_optimise yes
    -tuning!maxaccept 64

Network Notes
    The tg3 driver was used for the network controller. This is the default for RH 7.3.
    Three switches used because the clents have fiber adapters and the SUT has copper switches.
    - The clients were connected to the ACESwitch with fiber cables.
    - The ACESwitch was connected to the Summit switch with a fiber cable.
    - The SUT was connected to the Summit switch with a copper cable.

Other Notes
    Tuning disclosure: IBM-Zeus-tuning-20021224.txt
    API: HP-20020723.-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	CD	CD	CD	CD	CD	CD
	2	CD	CD	CD	CD	CD	CD
=>	3	CD	CD	CD	CD	CD	CD