SPECweb99_SSL Result

IBM : xSeries 360
Zeus : Zeus V4.1R1

CD SPECweb99_SSL

SPEC has discovered a bug in the SPECweb99_SSL test harness run on the client systems used in this result. The bug prevents these client systems from generating the correct SPECweb99_SSL workload. Specifically, the bug 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	Dec-2000
Supplemental System	May-2002

Hardware

Vendor	IBM
Model	xSeries 360
Processor	2.0 GHz Intel Xeon MP
# Processors	4 cores, 4 chips, 1 core/chip
Primary Cache	12KBI+8KBD on chip
Secondary Cache	256KB L2
Other Cache	2MB L3 cache
Memory	8 GB
Disk Subsystem	14 x 18GB ST318451LC
Disk Controllers	1 IBM ServeRaid 4Lx
Other Hardware	2 x Alteon ACEswitch 180, 1 IBM EXP-300 Drive Bay

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	Oct-2002
Tested By	IBM
SPEC License	11

Network

# of Controllers	2
Network Controllers	Intel Pro 1000
# of Nets	2
Type of Nets	2
Network Speed	1 Gb/s
MSL (sec)	30 (Non RFC1122)
Time-Wait (sec)	60 (Non RFC1122)
MTU	1500

Clients

# of Clients	10
Model	IBM xSeries 330
Processor	1.13GHz Pentium III
# of Processors	1

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

                             Benchmark Configuration

Requested Connections           1650
Fileset Size (MB)               5397.28

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                             Notes/Tuning information

SUT Notes
    12 Disk Hardware RAID 0 for O/S and fileset, 2 disk RAID 0 for logfiles

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.core.optmem_max=10000000, default 10240
    -net.core.rmem_default=10000000,default recieve 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
    -net.ipv4.tcp_max_tw_buckets=150000, 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 4951
    -tuning!keepalive_timeout 20
    -tuning!keepalive_max 1700
    -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

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Test Run Details

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


                    Cumulative Conformance % Chart

    Run  Conforming     |  Percent of connections conforming at various speeds
    Num  Connections    |  380000 360000 340000 320000 300000 280000
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      1    1643         |   0.00   0.00   0.73  99.58 100.00 100.00
  =>  2    1643         |   0.00   0.00   0.30  99.58 100.00 100.00
      3    1642         |   0.00   0.00   0.36  99.52 100.00 100.00
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