SPECweb99_SSL Result

IBM : eServer xSeries 305 Zeus : Zeus V4.2	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	Apr-2003
HTTPS Software	Mar-2002
Operating System	Jul-2002
Supplemental System	May-2002

Hardware

Vendor	IBM
Model	eServer xSeries 305
Processor	3.06 GHz Intel Pentium 4
# Processors	1 core, 1 chip, 1 core/chip
Primary Cache	12KBI+8KBD on chip
Secondary Cache	512KB
Other Cache	None
Memory	4 GB
Disk Subsystem	14x18GB 15KRPM Ultra 160 SCSI Drives
Disk Controllers	1 ServeRaid 4Lx
Other Hardware	1 Extreme Networks Summit 7i GbE Switch 1 EXP300 drive enclosure

Software

Operating System	Red Hat Linux 7.3
File System	ext2
Other Software	None

HTTPS Software

Vendor	Zeus
HTTPS Software	Zeus V4.2
API	Zeus PEPP 0.8 ISAPI used for Dynamic content
Server Cache	None
Log Mode	Zeus CLF

Test Sponsor

Test Date	Mar-2003
Tested By	IBM
SPEC License	11

Network

# of Controllers	1
Network Controllers	Integrated Gigabit Ethernet
# of Nets	1
Type of Nets	Gigabit Ethernet
Network Speed	1 Gb/s
MSL (sec)	30 (Non RFC1122)
Time-Wait (sec)	60 (Non RFC1122)
MTU	1500

Clients

# of Clients	11
Model	IBM eServer xSeries 330
Processor	1133Mhz Pentium III
# of Processors	1
Memory	256MB
Network Controller	IBM Netfinity Gigabit Ethernet Adapter
Operating System	Microsoft Windows 2000 Advanced Server w/SP2

Compiler   Microsoft VC++ v6.0

                          Benchmark Configuration

Requested Connections   1015
Fileset Size (MB)   3367.2

==
                          Notes/Tuning information

SUT Notes
    14 disk hardware RAID0 for OS and logs and web pages

Operating System Notes
    Tuning parameters:
    - net.ipv4.conf.all.rp_filter = 1, enables source route verification, default 0
    - net.ipv4.tcp_timestamps = 0, turns TCP timestamp support off, default 1
    - net.ipv4.tcp_max_tw_buckets = 200000, sets TCP time-wait buckets pool size, default 180000
    - net.core.rmem_max = 10000000, maximum receive socket buffer size, default 65535
    - net.core.rmem_default = 10000000, default receive socket buffer size, default 65535
    - net.core.wmem_max = 10000000, maximum send socket buffer size, default 65535
    - net.core.wmem_default = 10000000, default send socket buffer size, default 65535
    - net.core.optmem_max = 10000000, maximum buffer size allowed per socket, default 10240
    - net.core.hot_list_length = 10000, maximum number of skb-heads to be cached, default 128
    - net.core.netdev.max_backlog = 20000, Maximim size of SYN backlog of the listening socket, default 300
    - 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
    Kernel is standard default Red Hat Linux (2.4.18-3smp)

HTTPS Software Notes
    Zeus Configuration
    - tuning!so_wbuff_size 1048576
    - tuning!softservers no
    - tuning!cbuff_size 65536
    - tuning!clientfirst_optimise yes
    - tuning!ssl_sessioncache_size 4951
    - tuning!sendfile_minsize 1
    - tuning!listen_queue_size 8192
    - tuning!keepalive_max 1500, The maximum number of keepalive connections the web
    -   server will allow, default 256
    - tuning!keepalive_timeout 20, If no traffic has been seen on a keepalive
    -   connection for this amount of time, then close the connection, default 15
    - tuning!maxaccept 64
    - modules!cgi!enabled yes
    - modules!isapi!enabled yes
    See IBM-Zeus-tuning-20021224.txt for a description of the Zeus tuning parameters
    ISAPI Source code is available in the SPECweb99_SSL support docs as HP-20020724-API.tar.gz
    ISAPI Configure parameters: -sendfile=yes -checkconfig=yes -locking=lockf -ssl=yes -64bit=no
    Virtual Server configuration
    - ip_name = server
    - bindaddr = 192.0.1.100, 192.0.2.100

==

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