

SPECweb99_SSL Result

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IBM : eServer xSeries 235          |||      CD  SPECweb99_SSL
Zeus : Zeus V4.2r2                |||
                                   |||
=====

```

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

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All Hardware           May-2003
HTTPS Software         Mar-2003
Operating System       Jul-2002
Supplemental System    May-2002

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Hardware

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Vendor                 IBM
Model                  eServer xSeries 235
Processor              3.06 GHz Intel Pentium 4
# Processors           2 cores, 2 chips, 1 core/chip
Primary Cache          12KBI+8KBD on chip
Secondary Cache        512KB
Other Cache            None
Memory                 6 GB
Disk Subsystem         6 36GB 15KRPM Ultra 320 SCSI Drives
Disk Controllers       On-board LSI controller
Other Hardware         1 Extreme Networks Summit 7i GbE Switch

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Software

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

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HTTPS Software

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Vendor                 Zeus
HTTPS Software         Zeus V4.2r2
API                   Zeus PEPP 0.8 ISAPI used for Dynamic content
Server Cache          None
Log Mode               Zeus Binary Log Format

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Test Sponsor

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Test Date              Apr-2003
Tested By              IBM
SPEC License           11

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Network

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# 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

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# of Clients           16
Model                  IBM eServer xSeries 330
Processor              933MHz Pentium III
# of Processors        1
Memory                 256MB
Network Controller     IBM Netfinity Gigabit Ethernet Adapter
Operating System       Microsoft Windows 2000 Advanced Server
Compiler               Microsoft VC++ v6.0

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Benchmark Configuration

Requested Connections 1800
Fileset Size (MB) 5880.4

Notes/Tuning information

SUT Notes

- 2 disk hardware RAID0 for OS and logs
3 disk hardware RAID0 for web pages

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.ipv4.tcp_timestamps = 0, turns TCP timestamp support off, default 1
- net.ipv4.tcp_max_tw_buckets = 330000, 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, default 10240
- net.core.hot_list_length = 10000, maximum number of skb-heads to be cached, default 128
- 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 (2.4.18-3bigmem)

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 5501
- tuning!sendfile_minsize 1
- tuning!listen_queue_size 8192
- tuning!keepalive_timeout 20
- tuning!keepalive_max 5500
- 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

Test Run Details

Table with 8 columns: Run Num, Conforming Connections, Percent Conform, Throughput ops/sec, Response msec, ops/sec/loadgen, Kbits/sec. Data rows show 'CD' for all values.