SPECweb99_SSL Result

```
================================================================================
                                                      ||
 Appro : 4100H                                        ||     CD SPECweb99_SSL
 Zeus Technology Ltd. : Zeus Web Server 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

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

                                   Hardware

Vendor                        Appro
Model                         4100H
Processor                     AMD Opteron 844, 1.8 GHz
# Processors                  4 cores, 4 chips, 1 core/chip
Primary Cache                 64KBI+64KBD
Secondary Cache               1MB on chip
Other Cache                   none
Memory                        16 GB pc2100 DDR
Disk Subsystem                3 36GB 15KRPM  Ultra 320 SCSI Drives
Disk Controllers              Onboard LSI SCSI
Other Hardware                1 Extreme Networks Summit 5i GbE Switch

                                   Software

Operating System              SuSE Linux 8.1
File System                   ext2
Other Software                Intel 4.2.17 driver

                                HTTPS Software

Vendor                        Zeus Technology Ltd.
HTTPS Software                Zeus Web Server V4.2r2 (32-bit)
API                           Zeus PEPP 0.8 ISAPI used for Dynamic content
Server Cache                  None
Log Mode                      Binary Log Format

                                 Test Sponsor

Test Date                     Apr-2003
Tested By                     Advanced Micro Devices
SPEC License                  49

                                    Network

# of Controllers              2
Network Controllers           Intel Pro/1000 MT Dual Port Server Adapter
# of Nets                     4
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                  8
Model                         Tyan Tiger/AMD Athlon MP
Processor                     AMD Athlon MP 1900+
# of Processors               2
Memory                        1024MB
Network Controller            Intel Pro/1000 XT
Operating System              Windows 2000 Professional, w/ SP3
Compiler                      Microsoft Visual C++ 6.0
```

Benchmark Configuration

Requested Connections 3270
Fileset Size (MB) 10584.72

Notes/Tuning information

SUT Notes
1 U320 15K 36GB SCSI disk for OS
1 U320 15K 36GB SCSI disk for log
1 U320 15K 36GB SCSI disk for fileset

Operating System Notes
One NIC irq bound per CPU
Each NIC's TX queue length set to 8192 via ifconfig, default 100
File systems mounted with "noatime,nodiratime", no inode access time updating
Tuning Parameters:
- net.ipv4.ip_forward = 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 = 2000000, 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
- fs.file-max = 163721, maximum number of open files, default 1024

HTTPS Software Notes
Zeus Configuration:
- tuning!bind_any no
- tuning!unique_bind yes
- tuning!cache_cooling_time 0
- tuning!cache_flush_interval 86400
- tuning!cache_stat_expire 86400
- tuning!cbuff_size 65536
- tuning!clientfirst_optimise yes
- tuning!keepalive_max -1
- tuning!keepalive_timeout 20
- tuning!listen_queue_size 8192
- tuning!maxaccept 64
- tuning!modules!cgi!cleansize 0
- tuning!sendfile no
- tuning!sendfile_maxsize 0
- tuning!sendfile_minsize 0
- tuning!so_wbuff_size 1048576
- tuning!softservers no
- tuning!ssl_diskcache no
- tuning!ssl_sessioncache_size 2617
Other Zeus 4.2r2 virtual_server performance parameters:
(%zeushome%/web-4.2r2/runningsites/ssl-4k8)
modules!cgi!enable yes
modules!isapi!enable yes

HTTP API Notes
Zeus PEPP configured with command: ./Configure --ssl=yes

Client Notes
Clients require a Tyan Tiger motherboard and an ATX capable case.
Case uses 300W ATX power supply, Clients use a 40G ATA 133 IDE hard drive.
Clients use DDR pc2100 memory.

Other Notes
Tuning Disclosure: See above.
Dynamic API: HP-20020724-API.tgz
Kernel config: AMD-20030401-kernel32-config.txt

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