

# SPECweb99\_SSL Result

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Advanced Micro Devices: Tyan S2865/Opteron 148

SPECweb99\_SSL =1084

Zeus Technology Ltd.: Zeus Web Server V4.2r4

Test Date: Jul-2005  
Tester: Advanced Micro Devices

Hardware Avail: Aug-2005 OS Avail: Jan-2005 HTTPS Software Avail: Nov-2003 Sup. Software Avail: Nov-2003 SPEC license #: 49

## Hardware

Vendor: Advanced Micro Devices  
Model: Tyan S2865/Opteron 148  
Processor: AMD Opteron 148, 2.2 GHz  
# Processors: 1 core, 1 chip, 1 core/chip  
Primary Cache: 64KBI + 64KBD on chip  
Secondary Cache: 1MB on chip  
Other Cache: none  
Memory: 4 GB (4x1GB) PC3200 DDR  
Disk Subsystem: 4 74GB 10KRPM SATA Drives  
Disk Controllers: Onboard SATA  
Other Hardware: 1 SMC 8624T Gigabit Switch

## Software

Operating System: SuSE Linux Enterprise Server 9 SP1 (32 bit)  
File System: ext2  
Other Software: none

## HTTPS Software

Vendor: Zeus Technology Ltd.  
HTTPS Software: Zeus Web Server V4.2r4  
API: Zeus PEPP 0.9pre1 ISAPI for Dynamic Content  
Server Cache: None  
Log Mode: Binary Log Format

## Test Sponsor

Test Date: Jul-2005  
Tested By: Advanced Micro Devices  
SPEC License: 49

## Network

# of Controllers: 1  
Network Controllers: SysKconnect SK-9E21D  
# 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: 3  
Model: Sun V20Z  
Processor: AMD Opteron 244  
# of Processors: 2  
Memory: 2048MB  
Network Controller: Onboard Broadcom BCM5703 Gigabit Ethernet  
Operating System: SuSE SLES 9  
Compiler: gcc v3.3.3

## Notes/Tuning Information

### SUT Notes

- 1 SATA 10K 74GB disk with ext3 for root
- 1 SATA 10K 74GB disk with ext2 for logs
- 2 SATA 10K 74GB disks with in software RAID 0 configuration with ext2 for fileset

### Operating System Notes

irqbalancer disabled

Each NIC's TX queue length set to 40000 via ifconfig, default 1000

Log/Fileset filesystem mounted with "noatime,nodiratime,noacl", no inode access time updating, no access control lists  
ulimit -n 27867, sets number of open files, default 1024  
fs.file-max = 112469, maximum number of open file handles, default 1024

#### 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.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

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## Notes/Tuning Information (Continued)

### Operating System Notes (Continued)

- net.ipv4.tcp\_mem = 30000000 30000000 30000000, maximum TCP buffer space, default 31744 32256 32768

### HTTPS Software Notes

Zeus Configuration:

tuning!bind\_any no

tuning!unique\_bind yes

tuning!so\_wbuff\_size 1048576

tuning!softservers no

tuning!cbuff\_size 65536

tuning!clientfirst\_optimise yes

tuning!ssl\_sessioncache\_size 7507

tuning!listen\_queue\_size 8192

tuning!keepalive yes

tuning!keepalive\_timeout 360

tuning!multiple\_accept yes

tuning!keepalive\_max -1

tuning!maxaccept 2048

tuning!modules!cgi!enabled yes

tuning!isapi!enabled yes

tuning!max\_connections 3000

tuning!modules!stats!enabled no

tuning!modules!nsapi!enabled no

Refer to AMD-Zeus-tuning-20050509.txt for a description of Zeus tuning parameters

### HTTP API Notes

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

Zeus PEPP compiled with default gcc (v3.3.3)

### Client Notes

Client code configured with command: ./configure --enable-posix-threads

Client code compiled with default gcc (v3.2.2)

net.ipv4.ip\_local\_port\_range 1024 65535

Clients use DDR PC2700 memory

### Other Notes

Tuning Disclosure: See above

Dynamic API: HP-20020724-API.tgz

Client kernel config: Default SuSE SLES8 x86 SP3 (2.4.21-138-smp)

Server kernel config: Default SLES9 SP1 32 bit 2.6.5-7.139-bigsm

SUT requires a Tyan S2865 motherboard, an eATX 4 hard drive capable case with a minimum 420 watt power supply.