SPECweb99_SSL Result

Advanced Micro Devices: Tyan S2865/Opteron 148
Zeus Technology Ltd.: Zeus Web Server V4.2r4

SPECweb99_SSL =1084

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

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Network

# of Controllers:	1
Network Controllers:	SysKonnect 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

SPECweb99_SSL Result

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