SPECweb99_SSL Result

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PogoLinux: PerformanceWare 3566
Zeus Technology Ltd.: Zeus Web Server 4.2r4 (64 bit)

SPECweb99_SSL =8275

Test Date: Sep-2005
Tester: Advanced Micro Devices

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

Hardware

Vendor:	PogoLinux
Model:	PerformanceWare 3566
Processor:	Opteron 880, 2.4 GHz
# Processors:	8 cores, 4 chips, 2 cores/chip
Primary Cache:	64KBI + 64KBD per core on chip
Secondary Cache:	1MB per core on chip
Other Cache:	none
Memory:	32 GB DDR400
Disk Subsystem:	5 x 73GB 15k RPM Internal ULTRA320 SCSI
Disk Controllers:	Onboard SCSI
Other Hardware:	2 SMT 8624T Gigabit Switches

Software

Operating System:	SuSE Linux Enterprise Server 9 for x86_64 SP2
File System:	ext2
Other Software:	none

HTTPS Software

Vendor:	Zeus Technology Ltd.
HTTPS Software:	Zeus Web Server 4.2r4 (64 bit)
API:	Zeus PEPP 0.9pre1 ISAPI for Dynamic content
Server Cache:	none
Log Mode:	Zeus Binary CLF

Test Sponsor

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Network

# of Controllers:	4
Network Controllers:	Intel Pro/1000 MT Dual Port Server Adapter
# of Nets:	8
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:	24
Model:	Sun Fire V20Z
Processor:	AMD Opteron 244, 1.4 GHz
# of Processors:	2
Memory:	2048MB
Network Controller:	Onboard Broadcom BCM5703 Gigabit Ethernet
Operating System:	SuSE SLES 8 SP3
Compiler:	gcc 3.2.2

Notes/Tuning Information

SUT Notes

1 U320 15K 73GB SCSI disk for OS and swap
1 U320 15K 73GB SCSI disk for access log
3 U320 15K 73GB SCSI disk for fileset (software RAID 0)

Operating System Notes

One NIC irq bound per CPU, default handled by irqbalancer
irqbalancer disabled
taskset used to set processor affinity for each Zeus instance
ulimit -n 500000, sets number of open files, default 1024
Each NIC's TX queue length set to 40000 via ifconfig, default 1000
os, log, & fileset mounted with 'noatime, nodiratime, noacl', no inode access time updating, no access control lists
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_fin_timeout = 210, time to hold socket in state FIN-WAIT-2, default 60
net.ipv4.tcp_max_tw_buckets = 2000000, sets TCP time-wait buckets pool size, default 180000
vm.max_map_count = 131072, maximum number of active map areas, default 65536
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
net.ipv4.tcp_mem = 30000000 30000000 30000000, maximum TCP buffer space, default 31744 32256 32768
fs.file-max = 1100000, maximum number of open files, default 1024
Each NIC's RX descriptor size set to 4096, default 256

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Notes/Tuning Information (Continued)

HTTPS Software Notes

Zeus Configuration
runningsite/wstest: bindaddr IP addr. 1 - IP addr. 8
global.cfg:
tuning!bind_any no
tuning!unique_bind yes
tuning!cache_cooling_time 0
tuning!cache_files 597585
tuning!cache_flush_interval 31536000
tuning!cache_small_file 4096
tuning!cache_large_file 1048576
tuning!cache_max_bytes 27769803776
tuning!cache_stat_expire 31536000
tuning!cbuff_size 65536
tuning!clientfirst_optimise yes
tuning!keepalive yes
tuning!keepalive_max -1
tuning!keepalive_timeout 3600
tuning!listen_queue_size 10240
tuning!maxaccept 4096
tuning!modules!cgi!cleansize 0
tuning!num_cgid 8
tuning!sendfile no
tuning!sendfile_minsize 0
tuning!sendfile_maxsize 0
tuning!so_wbuff_size 1048576
tuning!softservers no
tuning!ssl_diskcache no
tuning!ssl_sessioncache_size 2617
tuning!ssl_cbuff_size 32840
tuning!modules!stats!enabled no
tuning!modules!nsapi!enabled no
See SUN-20050815-Zeus-tunings.txt for a description of the 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
2 SMT 8624T Gigabit Switches used for 8 networks