SPECweb99_SSL Result

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PogoLinux: PerformanceWare 3566
Zeus Technology Ltd: Zeus Web Server V4.2r4 (64-bit)

SPECweb99_SSL =5360

Test Date: Aug-2005
Tester: Advanced Micro Devices

Hardware Avail:	Sep-2005	OS Avail:	Aug-2004	HTTPS Software Avail:	Nov-2003	Sup. Software Avail:	Nov-2003	SPEC license #:	49

Hardware

Vendor:	PogoLinux
Model:	PerformanceWare 3566
Processor:	AMD Opteron 854, 2.8 GHz
# Processors:	4 cores, 4 chips, 1 core/chip
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1MB on chip
Other Cache:	none
Memory:	32 GB PC3200 DDR
Disk Subsystem:	5 73GB 15KRPM SCSI drives
Disk Controllers:	Onboard LSI SCSI
Other Hardware:	2 SMC 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 V4.2r4 (64-bit)
API:	Zeus PEPP 0.9pre1 ISAPI for Dynamic content
Server Cache:	None
Log Mode:	Binary Common Log Format

Test Sponsor

Test Date:	Aug-2005
Tested By:	Advanced Micro Devices
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Network

# of Controllers:	2
Network Controllers:	Intel Pro/1000 MT Server Adapter
# of Nets:	4
Type of Nets:	Gigabit Ethernet
Network Speed:	1 Gb/s
MSL (sec):	(Non RFC1122)
Time-Wait (sec):	(Non RFC1122)
MTU:	1500

Clients

# of Clients:	24
Model:	Sun V20Z
Processor:	AMD Opteron 248
# of Processors:	2
Memory:	2048MB
Network Controller:	Onboard Broadcom BCM5703 gigabit ethernet
Operating System:	SLES 8
Compiler:	gcc v3.2.2

Notes/Tuning Information

SUT Notes

1 disk for OS, 1 disk for logs and 3 disks in RAID0 for fileset

Operating System Notes

One NIC irq bound per CPU
irqbalancer disabled, default enabled
ulimit -n 143539, sets number of open files, default 1024
Each NIC's TX queue length set to 40000 via ifconfig, default 1000
Ethtool used to disable TSO on all NICs (default enabled)
log, & html/fileset partitions 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.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 = 291879, maximum number of open files, default 1024

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Notes/Tuning Information (Continued)

HTTPS Software Notes

Zeus Configuration:
tuning!bind_any no
tuning!unique_bind yes
tuning!cache_cooling_time 0
tuning!cache_files 282011
tuning!cache_flush_interval 180000
tuning!cache_small_file 90000
tuning!cache_large_file 1048576
tuning!cache_max_bytes 18364760064
tuning!cache_stat_expire 180000
tuning!cbuff_size 65536
tuning!clientfirst_optimise yes
tuning!keepalive yes
tuning!keepalive_max -1
tuning!keepalive_timeout 3600
tuning!listen_queue_size 8192
tuning!maxaccept 2048
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 6037
tuning!ssl_cbuff_size 32840
tuning!modules!stats!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

Other Notes

Dynamic API: HP-20020724-API.tgz
Server kernel config: Default SLES9 (2.6.5-7.97-smp)