SPECweb99_SSL Result

Appro : 4100H Zeus Technology Ltd. : Zeus Web Server V4.2r2	CD SPECweb99_SSL

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	May-2003
Supplemental System	May-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 Enterprise Server 8 for AMD64
File System	ext2
Other Software	None

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 3195
Fileset Size (MB) 10345.6

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-64)
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-kernel64-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