SPECweb99_SSL Result

Hewlett-Packard Company: HP ProLiant BL25p
Zeus Technology Limited: Zeus V4.2r4 (64-bit)

SPECweb99_SSL =2891

Test Date: Sep-2005
Tester: Hewlett-Packard Company

Hardware Avail:	Sep-2005	OS Avail:	Jan-2005	HTTPS Software Avail:	Nov-2003	Sup. Software Avail:	Apr-2005	SPEC license #:	3

Hardware

Vendor:	Hewlett-Packard Company
Model:	HP ProLiant BL25p
Processor:	AMD Opteron 254, 2.8GHz
# Processors:	2 cores, 2 chips, 1 core/chip
Primary Cache:	64KBI+64KBD (on chip) per core
Secondary Cache:	1MB (on chip) per core
Other Cache:	none
Memory:	16GB (8x2GB PC3200 DDR)
Disk Subsystem:	1x72.8GB 1x146GB Ultra320 15Krpm
Disk Controllers:	hp Smart Array 6i with 128MB BBWC
Other Hardware:	HP BladeSystem p-Class interconnect switch

Software

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

HTTPS Software

Vendor:	Zeus Technology Limited
HTTPS Software:	Zeus 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:	Sep-2005
Tested By:	Hewlett-Packard Company
SPEC License:	3

Network

# of Controllers:	2
Network Controllers:	1xNC7781, 1xNC7782
# of Nets:	2
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:	HP ProLiant DL360 G3
Processor:	3.06GHz 1MB L3 cache Intel Xeon
# of Processors:	2 cores, 2 chips, 1 core/chip
Memory:	2048MB
Network Controller:	2xIntegrated NC7781
Operating System:	Windows Server 2003 Std. Edition
Compiler:	Mircosoft Visual C++ 6.0

Notes/Tuning Information

SUT Notes

1 drive RAID 0 used for OS and access log
1 drive RAID 0 used for file set
HP BladeSystem p-Class Enhanced Server Blade Enclosure
HP BladeSystem p-Class Power Subsystem

Operating System Notes

Filesystem mounted with noatime,nodiratime,noacl - no inode access time updateing, no access control lists
irq_balancer demon disabled, default enabled
Each NIC IRQ bound to two seperate logical CPU, default round-robin
Each NIC's TX queue length set to 40000, default 100
ulimit -n 124001, sets number of open files, default 1024
1 > /proc/sys/net/ipv4/conf/all/rp_filter #enables source route verification, default 0
0 > /proc/sys/net/ipv4/tcp_timestamps #turns TCP timestamp support off, default 1
2000000 > /proc/sys/net/ipv4/tcp_max_tw_buckets #sets TCP time-wait buckets pool size, default 180000
30000000 30000000 30000000 > /proc/sys/net/ipv4/tcp_rmem #maximum TCP read-buffer space allocatable, default 4096 87380 174760
30000000 30000000 30000000 > /proc/sys/net/ipv4/tcp_wmem #maximum TCP write-buffer space allocatable, default 4096 16384 131072
30000000 30000000 30000000 > /proc/sys/net/ipv4/tcp_mem #maximum TCP buffer space allocatable, default 31744 32256 32768
10000000 > /proc/sys/net/core/rmem_max #maximum receive socket buffer size, default 65535
10000000 > /proc/sys/net/core/rmem_default #default receive socket buffer size, default 65535
10000000 > /proc/sys/net/core/wmem_max #maximum send socket buffer size, default 65535
10000000 > /proc/sys/net/core/wmem_default #default send socket buffer size, default 65535
10000000 > /proc/sys/net/core/optmem_max #default 10240
384001 > /proc/sys/fs/file-max #maximum number of open files, default 1024
TSO turned off for all NIC ports #TCP Segmentation Offload, default on
Timer IRQ bound to logical processor #1, default round-robin
Storage IRQ bound to logical processor #0, default round-robin

SPECweb99_SSL Result

Notes/Tuning Information (Continued)

HTTPS Software Notes

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 12884901888
tuning!cache_stat_expire 31180000
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
tuning!pipeline_readahead 0
See HP-20030414-tunings.txt for a description of the Zeus tuning parameters

HTTP API Notes

Dynamic API: HP-20020724-API.tgz
Zeus PEPP configured with the ./Configure --ssl=yes

Client Notes

The alternate performance neutral alt.Win32 client was used.
TcpipParametersMaxUserPort=0xfffe, sets maximum open ports to 65534
TcpipParametersTcpTimedWaitDelay=60, sets TIME_WAIT parameter to 60 seconds (non-RFC 1122),default 240
TcpipParametersMaxFreeTwTcbs=100000, sets maximum number of TIME_WAIT tcbs to 100,000
TcpipParametersTcpWindowSize=65535, sets TCP receive window size, default 8192
Clients 1 thru 4 speed set to 328, Clients 5 thru 8 speed set to 395, default all clients equal speeds

Other Notes

Server kernel: default SLES 9 SP2 (2.6.5-7.187-smp)