SPECweb99_SSL Result

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Hewlett-Packard: hp server rx5670
Zeus Technology Limited: Zeus 4.2

SPECweb99_SSL =1888

Test Date: Oct-2002
Tester: Hewlett-Packard Company

Hardware Avail:	Sep-2002	OS Avail:	Aug-2002	HTTPS Software Avail:	Nov-2002	Sup. Software Avail:	Aug-2002	SPEC license #:	3

Hardware

Vendor:	Hewlett-Packard
Model:	hp server rx5670
Processor:	1 GHz Intel Itanium 2
# Processors:	4 cores, 4 chips, 1 core/chip
Primary Cache:	16KBI+16KBD on chip
Secondary Cache:	256KB unified on chip
Other Cache:	3072KB unified on chip
Memory:	16 GB
Disk Subsystem:	2x36GB (10K rpm)
Disk Controllers:	SCSI C896 UW SE (internal)
Other Hardware:	4 x Alteon 180e Switches

Software

Operating System:	HP-UX 11i v1.6
File System:	See SUT Notes
Other Software:	B3913DB C.05.36 HP aC++/C

HTTPS Software

Vendor:	Zeus Technology Limited
HTTPS Software:	Zeus 4.2
API:	ISAPI
Server Cache:	None
Log Mode:	Binary Log Format

Test Sponsor

Test Date:	Oct-2002
Tested By:	Hewlett-Packard Company
SPEC License:	3

Network

# of Controllers:	4
Network Controllers:	HP A6847A PCI Gigabit Ethernet
# 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:	12
Model:	HP 9000/A500-5X
Processor:	550 MHz PA-8600
# of Processors:	2
Memory:	4 GB
Network Controller:	HP A4926A Gigabit Ethernet
Operating System:	HP-UX 11i
Compiler:	B3901BA B.11.11.04 HP C/ANSI C

Notes/Tuning Information

SUT Notes

1 (36 GB 10K rpm) disk with vxfs used for OS and logs
1 (36 GB 10K rpm) disk with hfs used for the file_set
Bound each Zeus instance to the processor corresponding to its NIC
Processor binding is performed by: mpsched -c cpu# -p pid
Set page size attribute for zeus.web and zeus.cgi binaries
chatr +pd 4k +pi 4k zeus.cgi
chatr +pd 64M +pi 64M zeus.web

Operating System Notes

HP-UX Tunable Parameters:
dbc_max_pct=30 Max Buffer Cache Size as Percent of RAM (50)
dbc_min_pct=30 Min bufer Cache Size as Percent of RAM (5)
maxfiles=60000 Soft File Limit per Process (60)
maxfiles_lim=60000 Hard File Limit per Process (1024)
maxssiz_64bit=0x0000000180000000 Max Stack Size for 64-Bit Procs (0x00800000)
maxuprc=10000 Max number of user processes (75)
nfile=5000 Max number of open files (790)
ninode=60000 Max number of inodes (444)
nkthread=8000 Max number of kernel threads (499)
nproc=1000 Max number of processes (276)
tcphashsz=16384 Relative Scaling Factor for TCP & IP Int. Tables(2048)
vps_ceiling=4096 Max System selected page size [KB] (16)
vps_pagesize=64 Default User page size [KB] (4)

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Notes/Tuning Information (Continued)

HTTPS Software Notes

Zeus Global Parameters:
tuning!cache_files 356750
tuning!cache_max_bytes 0
tuning!cache_small_file 0
tuning!cache_large_file 1048576
tuning!cache_stat_expire 86400
tuning!cache_flush_interval 86400
tuning!listen_queue_size 8192
tuning!multiple_accept yes
tuning!so_rbuff_size 0
tuning!so_wbuff_size 1048576
tuning!cbuff_size 65536
tuning!keepalive yes
tuning!keepalive_timeout 1200
tuning!keepalive_max -1
tuning!timeout 600
tuning!unique_bind yes
tuning!bind_any no
tuning!sendfile no
tuning!modules!cgi!cbuff_size 1048576
tuning!modules!cgi!cleansize 0
tuning!ssl_keepalive yes
tuning!ssl_sessioncache_size 256
tuning!ssl_diskcache no
tuning!softservers no
tuning!use_poll no
tuning!modules!stats!enabled no
tuning!modules!nsapi!enabled no
tuning!modules!isapi!enabled yes
tuning!cache_cooling_time 0
tuning!maxaccept 1024
security!enabled yes

HTTP API Notes

Zeus ISAPI interface used
Zeus PEPP Toolkit(0.6) used for SPECweb99_SSL dynamic content
./Configure --sendfile=no --checkconfig=yes --locking=semop

Network Notes

Networking Tunable Parameters:
tcp_xmit_hiwater_def=2000000 Max unsent data triggers flow control(32768)
tcp_conn_request_max=1024 Max outstanding connection reqs (20)
tcp_conn_strategy=1 Selects TCP connection strategy (0)

Client Notes

Client code generated with ./configure --enable-posix-threads
HP-UX Tunable Parameters:
max_thread_proc=800 Number of threads per process (64)
maxusers=256 Value of MAXUSERS macro (32)
ncallout=5000 Increase number of pending timeouts
nkthread=8000 Maximum number of system-wide threads (499)
ninode=5000 Maximum number of inodes (444)
nfile=4096 Maximum number of open files (790)
maxswapchunks=2048 Maximum number of swap chunks (256)

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Notes/Tuning Information (Continued)

Other Notes

Tuning Disclosure: HP-20020708.txt
Dynamic API: HP-20010917-API.tar.gz