SPECweb99_SSL Result

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Hewlett-Packard Company: HP ProLiant BL30p
Zeus Technology Limited: Zeus V4.2r4

SPECweb99_SSL =1416

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

Hardware Avail:	Dec-2004	OS Avail:	Aug-2004	HTTPS Software Avail:	Nov-2003	Sup. Software Avail:	Nov-2003	SPEC license #:	3

Hardware

Vendor:	Hewlett-Packard Company
Model:	HP ProLiant BL30p
Processor:	3.2GHz Intel Xeon
# Processors:	2 cores, 2 chips, 1 core/chip (Hyper-Threading enabled)
Primary Cache:	12KBI+8KBD
Secondary Cache:	512KB
Other Cache:	2MB L3
Memory:	4GB (2x2GB PC2100 DDR)
Disk Subsystem:	2x60GB ATA100
Disk Controllers:	Integrated ATA
Other Hardware:	2xHP BladeSystem Patch Panel

Software

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

HTTPS Software

Vendor:	Zeus Technology Limited
HTTPS Software:	Zeus V4.2r4
API:	Zeus PEPP 0.9pre1 ISAPI for dynamic content
Server Cache:	none
Log Mode:	Binary Common Log Format

Test Sponsor

Test Date:	May-2005
Tested By:	Hewlett-Packard Company
SPEC License:	3

Network

# of Controllers:	2
Network Controllers:	Integrated NC7781
# 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:	4
Model:	HP ProLiant DL360 G3
Processor:	3.06GHz 1MB L3 cache Intel Xeon
# of Processors:	2 cores, 2 chips, 1 core/chip
Memory:	512MB
Network Controller:	2xIntegrated NC7781
Operating System:	Windows Server 2003 Std. Edition
Compiler:	Mircosoft Visual C++ 6.0

Notes/Tuning Information

SUT Notes

1 drive used for OS and log, 1 drive used for workload
1xHP BladeSystem p-Class enclosure
1xHP BladeSystem p-Class Power Subsystem

Operating System Notes

Filesystem mounted with noatime,nodiratime - no inode access time updateing, no access control lists
irq_balancer disabled, default enabled
Each NIC irq bound to two logical CPUs
Each NIC's TX queue length set to 40000, default 100
ulimit -n 72720, sets number of open files, default 1024
/proc/sys/net/ipv4/conf/all/rp_filter = 1 #enables source route verification, default 0
/proc/sys/net/ipv4/tcp_timestamps =1 #turns TCP timestamp support off, default 1
/proc/sys/net/ipv4/tcp_max_tw_buckets = 2000000 #sets TCP time-wait buckets pool size, default 180000
/proc/sys/net/ipv4/tcp_rmem = 30000000 30000000 30000000 #maximum TCP read-buffer space allocatable, default 4096 87380 174760
/proc/sys/net/ipv4/tcp_wmem = 30000000 30000000 30000000 #maximum TCP write-buffer space allocatable, default 4096 16384 131072
/proc/sys/net/ipv4/tcp_mem = 30000000 30000000 30000000 #maximum TCP buffer space allocatable, default 31744 32256 32768
/proc/sys/net/core/rmem_max = 10000000 #maximum receive socket buffer size, default 65535
/proc/sys/net/core/rmem_default = 10000000 #default receive socket buffer size, default 65535
/proc/sys/net/core/wmem_max = 10000000 #maximum send socket buffer size, default 65535
/proc/sys/net/core/wmem_default = 10000000 #default send socket buffer size, default 65535
/proc/sys/net/core/optmem_max = 10000000 #default 10240
/proc/sys/fs/file-max = 291879 #maximum number of open files, default 1024

HTTPS Software Notes

tuning!unique_bind yes
tuning!cache_cooling_time 0
tuning!cache_files 282011

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Notes/Tuning Information (Continued)

HTTPS Software Notes (Continued)

tuning!cache_flush_interval 31536000
tuning!cache_max_bytes 0
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 8192
tuning!maxaccept 2500
tuning!modules!cgi!cleansize 0
tuning!sendfile yes
tuning!sendfile_maxsize 1
tuning!so_wbuff_size 1048576
tuning!softservers no
tuning!ssl_sessioncache_size 7507
tuning!modules!stats!enabled no
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 alternative 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

Other Notes

Server kernel: default SLES 9 (2.6.5-7.97-smp)