

SPECweb99_SSL Result

Hewlett-Packard : hp server rx5670
 Zeus Technology Limited : Zeus 4.2r2

NC SPECweb99_SSL

SPEC has determined that this result was not in compliance with the SPECweb99_SSL run and reporting rules. Specifically, the result did not meet the 3 month availability requirement in the SPECweb99_SSL run rules due to a change in availability of the OS.

PERFORMANCE

Iteration	Conforming Simultaneous Connections
1	NC
2	NC
3	NC
Median	NC

Availability Dates

All Hardware Jul-2003
 HTTPS Software Mar-2003
 Operating System Jul-2003
 Supplemental System Jul-2003

Hardware

Vendor Hewlett-Packard
 Model hp server rx5670
 Processor 1.5 GHz Intel Itanium 2
 # Processors 2 cores, 2 chips, 1 core/chip
 Primary Cache 16KBI+16KBD on chip
 Secondary Cache 256KB unified on chip
 Other Cache 6144KB unified on chip
 Memory 24 GB (24x1GB)
 Disk Subsystem 2x36GB (10K RPM) 1x18GB (10K RPM)
 Disk Controllers SCSI C896 UW SE (internal)
 Other Hardware 2 x Alteon 180e Switches

Software

Operating System HP-UX 11i v2
 File System See SUT Notes
 Other Software B3913DB C.05.36 HP aC++/C

HTTPS Software

Vendor Zeus Technology Limited
 HTTPS Software Zeus 4.2r2
 API ISAPI
 Server Cache None
 Log Mode Binary Log Format

Test Sponsor

Test Date Mar-2003
Tested By Hewlett-Packard Company
SPEC License 3

Network

of Controllers 2
Network Controllers HP A6847A PCI Gigabit Ethernet
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 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

Benchmark Configuration

Requested Connections 1750
Fileset Size (MB) 5719.36

Notes/Tuning information

SUT Notes

1 (36 GB 10K RPM) disk with vxfs used for OS
1 (36 GB 10K RPM) disk with hfs used for the file_set
1 (18 GB 10K RPM) disk with hfs with largefiles, behind used for logs
Largefiles is an option used when making the hfs file system. When this option is used, the maximum size for the files created on the file system is not limited to the 2 GB limit.
Behind is an option used when mounting the hfs file system. This enables asynchronous writes to disk.
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 64k +pi 64k zeus.cgi
chatr +pd 64M +pi 64M zeus.web

Operating System Notes

HP-UX Tunable Parameters:
dbc_max_pct=35 Max Buffer Cache Size as Percent of RAM (50)
dbc_min_pct=35 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)
nfile=120000 Max number of open files (790)
ninode=60000 Max number of inodes (444)
tcpshasz=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)

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)

Gigabit Tunable Parameters:

send_max_bufs=128 Number of sending buffers consumed to trigger interrupt (16)

recv_max_bufs=128 Number of receiving buffers consumed to trigger interrupt (1)

send_coal_ticks=5000 Number of ticks to wait to trigger interrupt (0)

recv_coal_ticks=12000 Number of ticks to wait to trigger interrupt (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)

Other Notes

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

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Test Run Details

Run Num	Conforming Connections	Percent Conform	Throughput ops/sec	Response msec	ops/sec/ loadgen	Kbits/ sec
=> 1	NC	NC	NC	NC	NC	NC
2	NC	NC	NC	NC	NC	NC
3	NC	NC	NC	NC	NC	NC