

SPECweb99 Result

© Copyright 1999, Standard Performance Evaluation Corporation

Hewlett-Packard: hp server rp8400
Zeus Technology Limited: Zeus 3.4r3 64bit

SPECweb99 = 9186
Test Date: Sep-2001
Tester: Hewlett-Packard Company

Hardware Avail: Sep-2001 OS Avail: Dec-2001 HTTP Software Avail: Oct-2001 Sup. Software Avail: Aug-2001 SPEC license #: 3

Hardware

Vendor: Hewlett-Packard
Model: hp server rp8400
Processor: PA-8700 750MHz
Processors: 8 cores, 8 chips, 1 core/chip
Primary Cache: 768KBI+1536KBD on chip
Secondary Cache: None
Other Cache: None
Memory: 64 GB
Disk Subsystem: 15x18GB 15Krpm, 1x18GB 10Krpm
Disk Controllers: 1xHP A5158A FC Card
Other Hardware: HP VA7100 Disk Array

Software

Operating System: HP-UX 11i (64-bit) + patches
File System: HFS - Largefiles
Other Software: HP A4926A PCI Gigabit Ethernet

HTTP Software

Vendor: Zeus Technology Limited
HTTP Software: Zeus 3.4r3 64bit
API: ISAPI
Server Cache: See Zeus parameters
Log Mode: Binary Log Format

Test Sponsor

Test Date: Sep-2001
Tested By: Hewlett-Packard Company
SPEC License: 3

Network

of Controllers: 8
Network Controllers: HP A4926A PCI Gigabit Ethernet
of Nets: 8
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: 90
Model: HP 9000/A180C
Processor: 180MHz PA-7300LC
of Processors: 1
Memory: 128MByte
Network Controller: HP A5230A, PCI 100BaseT
Operating System: HPUX 11.0 ACE
Compiler: B3901BA B.11.11.02 HP C/ANSI C

Notes/Tuning Information

SUT Notes

Each Zeus instance bound to processor corresponding to its NIC
Bound Zeus cgi process to CPU that services the fewest clients
Processor binding performed by: mpsched -c <cpu> -p <pid>

Operating System Notes

HP-UX Internet Operating Environment with following patches:

PHCO_23094 - libc cumulative header file patch

PHCO_23772 - libc cumulative patch

PHNE_24506 - cumulative ARPA transport patch

HP-UX Tunable Parameters:

dbc_max_pct=80 Max buffer cache size as percent of RAM (50)

dbc_min_pct=80 Min buffer 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=0x40000000 Max stack size for 64-bit procs (0x00800000)

maxswapchunks=16384 Max number of swap chunks (256)

maxuprc=512 Max number of user processes (75)

maxusers=512 Value of MAXUSERS macro (32)

nfile=1000000 Max number of open files (790)

ninode=1000000 Max number of inodes (444)

nkthread=8000 Max number of kernel threads (499)

nproc=512 Max number of processes (276)

tcphashsz=16384 Relative scaling factor for TCP & IP int. tables (2048)

semnu=256 Number of semaphore undo structures (10)

For more
Information
Contact

SPEC

info@spec.org
http://www.spec.org

SPECweb99 Result

© Copyright 1999, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

Operating System Notes (Continued)

vps_ceiling=4096 Max system selected page size [KB] (16)
vps_pagesize=64 Default user page size [KB] (4)

Filesystem for logs created with following options:
behind - Queue writes for flushing when page is full
largefiles - Enable creation of files greater than 2 gigabytes in size
64KB block size (def. 8KB) and 8KB fragments (def. 1KB)

HTTP Software Notes

Zeus Global Parameters:

```
tuning!bind_any          no
tuning!cache_cooling_time 0
tuning!cache_files       59990
tuning!cache_flush_interval 86400
tuning!cache_large_file   50000
tuning!cache_max_bytes   0
tuning!cache_small_file   0
tuning!cache_stat_expire  86400
tuning!cbuff_size        65536
tuning!keepalive         yes
tuning!keepalive_timeout 1200
tuning!keepalive_max     -1
tuning!listen_queue_size 8192
tuning!maxaccept         1024
tuning!multiple_accept   yes
tuning!sendfile          yes
tuning!sendfile_reservefd 57000
tuning!sendfile_minsize  0
tuning!sendfile_maxsize  1048576
tuning!softservers       no
tuning!so_rbuff_size     0
tuning!so_wbuff_size     1048576
tuning!timeout           600
tuning!unique_bind       yes
tuning!use_poll          no
tuning!modules!cgi!cbuff_size 1048576
tuning!modules!cgi!cleansize 0
tuning!modules!isapi!enabled yes
tuning!modules!nsapi!enabled no
tuning!modules!stats!enabled no
```

HTTP API Notes

Zeus ISAPI interface used
Zeus PEPP Toolkit (0.6) used for SPECweb99 dynamic content
./Configure --sendfile=yes --checkconfig=yes --locking=semop

Network Notes

8 HP Procurve 1600M Switches
Network 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)
Gigabit Tunable Parameters:
send_max_bufs=32 Number of send buffers consumed to trigger interrupt (16)
recv_max_bufs=12 Number of send buffers consumed to trigger interrupt (1)
recv_coal_ticks=10000 Number of ticks to wait to trigger interrupt (0)

SPECweb99 Result

© Copyright 1999, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

Network Notes (Continued)

send_coal_ticks=1000 Number of ticks to wait to trigger interrupt (1000)

Client Notes

7 networks with 12 clients each, set load generator speed to 2

1 network with 6 clients, set load generator speed to 1

HP-UX Tunable Parameters:

max_thread_proc=800 Number of threads per process (64)

maxusers=256 Value of MAXUSERS macro (32)

Other Notes

Tuning Disclosure: HP-20010917.txt

Dynamic API: HP-20010917-API.tar.gz