SPECweb99 Result

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Hewlett-Packard: HP 9000 Model L3000
Zeus Technology Limited: Zeus 3.3.7

SPECweb99 = 2110

Test Date: Dec-2000
Tester: Hewlett-Packard Company

Hardware Avail:	Nov-2000	OS Avail:	Feb-2000	HTTP Software Avail:	Aug-2000	Sup. Software Avail:	Aug-2000	SPEC license #:	3

Hardware

Vendor:	Hewlett-Packard
Model:	HP 9000 Model L3000
Processor:	PA-8600 550Mhz
# Processors:	2 cores, 2 chips, 1 core/chip
Primary Cache:	512KBI+1024KBD on chip
Secondary Cache:	None
Other Cache:	None
Memory:	16 GB
Disk Subsystem:	1x18GB, 2x36GB (10K rpm)
Disk Controllers:	1 HP FWD SCSI, 1 HP Ultra2 SCSI
Other Hardware:	None

Software

Operating System:	HP-UX 11.ACE (64-bit)
File System:	See Notes
Other Software:	HP A4926A PCI Gigabit Ethernet

HTTP Software

Vendor:	Zeus Technology Limited
HTTP Software:	Zeus 3.3.7
API:	ISAPI
Server Cache:	See Zeus parameters
Log Mode:	Binary Log Format

Test Sponsor

Test Date:	Dec-2000
Tested By:	Hewlett-Packard Company
SPEC License:	3

Network

# of Controllers:	2
Network Controllers:	HP A4926A PCI Gigabit Ethernet
# of Nets:	2
Type of Nets:	Gigabit Ethernet
Network Speed:	1000 Mbps
MSL (sec):	30 (Non RFC1122)
Time-Wait (sec):	60 (Non RFC1122)
MTU:	1500

Clients

# of Clients:	32
Model:	HP 9000/A180C
Processor:	4400Mhz PA-8500
# of Processors:	1
Memory:	128MByte
Network Controller:	HP A5230A, PCI 100BaseT
Operating System:	HPUX 11.0 ACE
Compiler:	B3901BA B.11.01.08 HP C/ANSI C

Notes/Tuning Information

SUT Notes

Set LargePage attribute on all Zeus Binaries [chatr +pd 16M +pi 16M]

Operating System Notes

HP-UX Patches
PHNE_20125 - NDD General Patch
PHNE_20316 - Cumlative Streams Patch
PHNE_21905 - LAN product cumulative patch
PHNE_21865 - 1000Base-SX/T cumulative patch
PHCO_22314 - libc cumulative patch
HP-UX Tunable Parameters
tcphashsz=16384, ninode=100000, nfile=120000
nproc=100 maxfiles=60000
maxfiles_lim=60000, dbc_max_pct=77, dbc_min_pct=77
maxdsiz=0x18000000, maxswapchunks=4096
vps_pagesize=32, vps_ceiling=65536

HTTP Software Notes

Zeus Global Parameters:
tuning!cache_files 150000
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!cache_cooling 0
tuning!listen_queue_size 8192
tuning!multiple_accept yes

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Notes/Tuning Information (Continued)

HTTP Software Notes (Continued)

tuning!so_rbuff_size 32768
tuning!so_wbuff_size 1048576
tuning!keepalive yes
tuning!keepalive_timeout 1200
tuning!keepalive_max -1
tuning!timeout 1200
tuning!unique_bind yes
tuning!bind_any no
tuning!sendfile yes
tuning!sendfile_reservefd 53001
tuning!sendfile_minsize 0
tuning!modules!cgi!cbuff_size 1048576
tuning!modules!cgi!cleansize 0
tuning!softservers no
tuning!modules!stats!enabled no
tuning!modules!nsapi!enabled no
tuning!modules!isapi!enabled yes
tuning!modules!fastcgi!enabled yes
Starts 2 copies of Zeus and each binds
to an unique IP address

HTTP API Notes

Zeus ISAPI interface used for most dynamic content
FastCGI used as communication method to manage all the independent CGI processes

Network Notes

2 HP Procurve 1600M Switches
Networking Tuning parameters:

tcp_xmit_hiwater_def=2000000 (Default = 32K)
(Amount of unsent data that triggers write-side flow control)
tcp_conn_request_max=1024 (Default = 20)
(Maximum number of outstanding inbound connection requests.)
tcp_conn_strategy=1 (Default = 0)
(Selects tcp connection strategy.)
Gigabit Tuning parameters:
send_max_bufs=32, recv_max_bufs=12

recv_coal_ticks=10000,send_coal_ticks=1000

Client Notes

ncallout 5000 (increase number of pending timeouts)
max_thread_proc 800 (allow more threads per process)
nkthread 2048 (maximum number of threads system-wide)