

# SPECweb99 Result

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

SPECweb99 = 3835

Test Date: Oct-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: PA8600 550Mhz  
# Processors: 4 cores, 4 chips, 1 core/chip  
Primary Cache: 512KBI+1024KBD on chip  
Secondary Cache: None  
Other Cache: None  
Memory: 16 GB  
Disk Subsystem: 1x9GB, 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 Gb Ethernet,  
B3929BA HP OnLineJFS

## 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: Oct-2000  
Tested By: Hewlett-Packard Company  
SPEC License: 3

## Network

# of Controllers: 4  
Network Controllers: HP A4926A PCI Gb Ethernet  
# of Nets: 4  
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: 48  
Model: HP 9000/B180L  
Processor: 180Mhz PA7300LC  
# of Processors: 1  
Memory: 128MByte  
Network Controller: HP A5230A, PCI 100BaseT  
Operating System: HP-UX 11.0 ACE  
Compiler: B3901BA B.11.01.20 HP C/ANSI C

## Notes/Tuning Information

### SUT Notes

chattr +r enable +pd 16M +pi 16M zeus.web to enable branch prediction and set pagesize  
OnlineJFS used for /logs filesystem  
All other filesystems are HP-UX HFS; no options specified

### Operating System Notes

HP-UX Patches  
PHNE\_20125 - NDD General Patch  
PHNE\_20316 - Cumulative Streams Patch  
PHNE\_21217 - LAN product cumulative patch  
PHNE\_21865 - 1000Base-SX/T cumulative patch  
PHCO\_20765 - libc cumulative patch  
PHNE\_22397 - cumulative ARPA Transport patch  
HP-UX Tunable Parameters  
tphashsz=16384, ninode=105000, nfile=185000  
maxfiles=60000,maxfiles\_lim=60000,dbc\_max\_pct=82  
dbc\_min\_pct=82,maxdsiz=0x18000000, maxdsiz\_64bit=0X0000000180000000  
maxswpchunks=4096,vps\_pagesize=32, vps\_ceiling=4096

### HTTP Software Notes

Zeus Global Parameters:  
tuning!cache\_files 85001  
tuning!cache\_max\_bytes 0  
tuning!cache\_small\_file 9216  
tuning!cache\_large\_file 1048576  
tuning!cache\_stat\_expire 864000  
tuning!cache\_flush\_interval 864000

For more  
Information  
Contact

SPEC

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

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## Notes/Tuning Information (Continued)

### HTTP Software Notes (Continued)

tuning!listen\_queue\_size 1024  
tuning!multiple\_accept yes  
tuning!so\_rbuff\_size 32768  
tuning!cbuff\_size 1048576  
tuning!keepalive yes  
tuning!keepalive\_timeout 1200  
tuning!keepalive\_max -1  
tuning!timeout 600  
tuning!unique\_bind yes  
tuning!bind\_any no  
tuning!sendfile yes  
tuning!sendfile\_reservefd 49001  
tuning!sendfile\_minsize 9216  
tuning!sendfile\_maxsize 1048576  
tuning!modules!cgi!cbuff\_size 921632  
tuning!modules!cgi!cleansize 0  
tuning!softservers no  
tuning!use\_poll no  
tuning!modules!stats!enabled no  
tuning!modules!nsapi!enabled no  
tuning!modules!isapi!enabled yes  
tuning!modules!fastcgi!enabled yes  
Starts 4 unique instances of Zeus sharing a common doc root, and each binds to an unique network 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

4 HP Procurve 1600M Switches  
Networking Tuning parameters:

tcp\_xmit\_hiwater\_def=2000000 (Default = 32K)  
(Amount of unsend 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)