

# SPECweb99 Result

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Hewlett-Packard: HP 9000 Model A500  
Zeus Technology Limited: Zeus 3.3.7

SPECweb99 = 1305

Test Date: Nov-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 A500  
Processor: PA8600 550Mhz  
# Processors: 1 core, 1 chip, 1 core/chip  
Primary Cache: 512KBI+1024KBD on chip  
Secondary Cache: None  
Other Cache: None  
Memory: 8 GB  
Disk Subsystem: 2 x 18GB (10K rpm)  
Disk Controllers: 1 HP Ultra2 SCSI LVD  
Other Hardware: None

## Software

Operating System: HP-UX 11.ACE (64-bit)  
File System: See Notes  
Other Software: A4926A 1000 Base PCI Gb Ethernet  
B3929BA HP OnLine JFS

## HTTP Software

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

## Test Sponsor

Test Date: Nov-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: 24  
Model: HP 9000/B180L  
Processor: 180Mhz PA7300LC  
# of Processors: 1  
Memory: 128MByte  
Network Controller: HP A5230A, PCI 100BaseT  
Operating System: HPUX 11.0 ACE  
Compiler: B3901BA B.11.01.20 HP C/ANSI C

## Notes/Tuning Information

### SUT Notes

Set LargePage attribute on all Zeus Binaries [chattr +pd 16M +pi16M]  
OnLineJFS used for /logs  
All other filesystems are HP-UX HFS; no options specified

### Operating System Notes

HP-UX Patches:  
PHCO\_22076 - Libc Cumulative Patch  
PHKL\_18541 - Updated Linkorder Files  
PHNE\_20125 - NDD General Patch  
PHNE\_20316 - Cumulative STREAMS Patch  
PHNE\_21865 - 1000Base-SX/T Cumulative Patch  
PHNE\_21905 - LAN Product Cumulative Patch  
HP-UX Tunable Parameters:  
tcphashsz=16384, ninode=92000, nfile=180000  
maxfiles=60000, maxuprc=100, nproc=200  
maxfiles\_lim=60000, dbc\_max\_pct=85, dbc\_min\_pct=85  
maxdsiz=0x18000000, maxssiz=0x10000000, maxswapchunks=4868  
maxdsiz\_64bit=0X0000000180000000, vps\_pagesize=32  
maxssiz\_64bit=0X0000000180000000, vps\_ceiling=4096

### HTTP Software Notes

Zeus Global Parameters:  
tuning!cache\_files 85001  
tuning!cache\_max\_bytes 0  
tuning!cache\_small\_file 5001  
tuning!cache\_large\_file 1048576

For more  
Information  
Contact

SPEC

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## Notes/Tuning Information (Continued)

### HTTP Software Notes (Continued)

```
tuning!cache_stat_expire 864000
tuning!cache_flush_interval 864000
tuning!listen_queue_size 8192
tuning!multiple_accept yes
tuning!so_rbuff_size 32768
tuning!so_wbuff_size 1048576
tuning!cbuff_size 1048576
tuning!keepalive yes
tuning!keepalive_timeout 600
tuning!keepalive_max -1
tuning!timeout 600
tuning!unique_bind yes
tuning!bind_any no
tuning!sendfile yes
tuning!sendfile_reservefd 45001
tuning!sendfile_minsize 5001
tuning!modules!cgi!cbuff_size 921632
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
tuning!use_poll no
```

### 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 timers)  
max\_thread\_proc 800 (allow more threads per process)  
nkthread 2048 (maximum number of threads system-wide)