

# SPECweb99 Result

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Compaq: ProLiant DL320  
Red Hat: TUX 2.0

SPECweb99 = 1438

Test Date: Jan-2001  
Tester: Compaq

Hardware Avail: Dec-2000 OS Avail: Jan-2001 HTTP Software Avail: Jan-2001 Sup. Software Avail: Jan-2001 SPEC license #: 2

## Hardware

Vendor: Compaq  
Model: ProLiant DL320  
Processor: Intel Pentium III EB 800MHz  
# Processors: 1 core, 1 chip, 1 core/chip  
Primary Cache: 16KBI+16KBD on chip  
Secondary Cache: 256KB(I+D) off chip  
Other Cache: none  
Memory: 2 GB  
Disk Subsystem: 2x 9.1GB Ultra2 SCSI  
Disk Controllers: Integrated Ultra-SCSI2 Controller  
Other Hardware: 1 X ALTEON ACEswitch 180 GbE Switch

## Software

Operating System: Red Hat Linux 7.0  
File System: ext2  
Other Software: None

## HTTP Software

Vendor: Red Hat  
HTTP Software: TUX 2.0  
API: TUX user API  
Server Cache: None  
Log Mode: Binary CLF

## Test Sponsor

Test Date: Jan-2001  
Tested By: Compaq  
SPEC License: 2

## Network

# of Controllers: 1  
Network Controllers: Alteon ACEnic 1000-SX  
# of Nets: 1  
Type of Nets: Gigabit Ethernet  
Network Speed: 1Gb/s  
MSL (sec): 30 (Non RFC1122)  
Time-Wait (sec): 60 (Non RFC1122)  
MTU: 1500

## Clients

# of Clients: 5  
Model: Compaq ProLiant DL 320  
Processor: Intel Pentium III EB 1000MHz  
# of Processors: 2  
Memory: 128MB  
Network Controller: Alteon ACEnic 1000-SX  
Operating System: Windows 2000 Professional sp1  
Compiler: Microsoft Visual C++ 6.0

## Notes/Tuning Information

### SUT Notes

1st disk 1st partition for OS  
2nd disk 1st partition for Logs  
2 disk software RAID0 on 2nd partitions for Data

### Operating System Notes

```
ulimit -n 10000, set number of open files to 10000, default 1024
net.core.wmem_max = 10000000, maximum send socket buffer size, default 131071
net.core.rmem_max = 10000000, maximum receive socket buffer size, default 131071
net.core.wmem_default = 10000000, default send socket buffer size, default 65535
net.core.rmem_default = 10000000, default receive socket buffer size, default 65535
net.core.optmem_max = 10000000, maximum amount of option memory buffers, default 10240
net.core.hot_list_length = 10000, maximum number of skb-heads to be cached, default 128
net.ipv4.tcp_timestamps = 0, turns TCP timestamp support off, default 1
net.ipv4.tcp_max_tw_buckets = 2000000, set TCP time-wait buckets pool size, default 180000
net.ipv4.tcp_rmem = 30000000 30000000 30000000, maximum TCP read-buffer space allocatable, default 4096 87380 174760
net.ipv4.tcp_wmem = 30000000 30000000 30000000, maximum TCP write-buffer space allocatable, default 4096 16384 131072
net.ipv4.tcp_mem = 30000000 30000000 30000000, maximum TCP buffer space allocatable, default 31744 32256 32768
net.ipv4.tcp_dsack = 1
net.ipv4.tcp_fack = 1
net.ipv4.tcp_retrans_collapse = 1
net.ipv4.tcp_sack = 1
net.ipv4.tcp_window_scaling = 1
net.ipv4.tcp_nonlocal_bind = 1, allow nonlocal IP addresses, default 0
kernel.panic = 0, reboot timeout in seconds, default
slabinfo = size-$N 250 120 where N in 32768 16384 8192 4096 2048 1024 512 256 128 64 32 per-CPU SLAB pool, defaults 124 62
mount /home, /, and /logs ext2 filesystems with noatime and nocheck options
```

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## Notes/Tuning Information (Continued)

### HTTP Software Notes

net.tux.max\_keepalive\_bw = 0  
net.tux.cgiroot = /, cgi root check, default /var/www/tux/cgiroot/  
net.tux.mode\_cgi = 32841, permission check bits, default 36160  
net.tux.0.listen.0 = 0  
net.tux.mode\_allowed = 255, allowed filesystem bits, default 4  
net.tux.mode\_forbidden = 2, forbidden filesystem bits, default 0000  
net.tux.Dprintk = 0, debugging off  
net.tux.clientport = 8080, apache backup webserver listen port, this is default  
net.tux.serverport = 80, TUX listen port, this is default  
net.tux.documentroot = /home/spec, Document root for web server, default /var/www/tux  
net.tux.threads = 1, only start one TUX primary thread, default 2  
net.tux.logging = 1, enable logging, default 0  
net.tux.logfile = /logs/http, name of log file, default /var/log/tux  
net.tux.ack\_pingpong = 1  
net.tux.nonagle = 2  
net.tux.push\_all = 0  
net.tux.zerocopy\_parse = 1

### Network Notes

txqueuelen = 10000, Transmit queue length, default 100