

# SPECweb99 Result

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Compaq Computer Corp.: Compaq Proliant DL380 G2  
Red Hat: TUX 2.0

SPECweb99 = 3121

Test Date: Jun-2001  
Tester: Compaq

Hardware Avail: Jun-2001 OS Avail: Apr-2001 HTTP Software Avail: Apr-2001 Sup. Software Avail: Apr-2001 SPEC license #: 2

## Hardware

Vendor: Compaq Computer Corp.  
Model: Compaq Proliant DL380 G2  
Processor: 1.13GHz Intel Pentium III  
# Processors: 2 cores, 2 chips, 1 core/chip  
Primary Cache: 16KBI+16KBD on chip  
Secondary Cache: 512KB  
Other Cache: None  
Memory: 6 GB  
Disk Subsystem: 6 18.2GB 10K RPM Ultra3 SCSI  
Disk Controllers: COMPAQ Smart Array 5i  
Other Hardware: Anritsu MultiFlow 5128 Switch

## Software

Operating System: Red Hat Linux 7.1  
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: Jun-2001  
Tested By: Compaq  
SPEC License: 2

## Network

# of Controllers: 3  
Network Controllers: Alteon AceNIC 1000SX  
# of Nets: 3  
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: 10  
Model: Compaq Proliant DL380 G2  
Processor: 1.0GHz Intel Pentium III  
# of Processors: 2  
Memory: 128MB  
Network Controller: Alteon ACENIC 1000SX  
Operating System: Red Hat 7.0  
Compiler: gcc 2.96

## Notes/Tuning Information

### SUT Notes

1 disk for OS and logs  
5 disks Hardware RAID0 for fileset

### Operating System Notes

Tuning parameters:  
ulimit -n 10000, set number of open files to 10000, default 8192  
net.core.optmem\_max=10000000, maximum amount of option memory buffers, default 10240  
net.core.rmem\_default=10000000, default receive socket buffer size, default 65535  
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.wmem\_max=10000000, maximum send socket buffer size, default 131071  
net.core.hot\_list\_length=10000, maximum number of skb-heads to be cached, default 128  
net.core.netdev\_max\_backlog=300000, number of unprocessed input packets before kernel starts dropping them, default 300  
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 195584 196096 196608  
net.ipv4.tcp\_timestamps=0, turns TCP timestamp support off, default on

### HTTP Software Notes

net.tux.cgiroot=/, cgi root check; default /var/www/tux/cgiroot/  
net.tux.cgi\_uid=99, userid for cgi scripts; default -1  
net.tux.cgi\_gid=99, groupid for cgi scripts; default -1  
net.tux.mode\_allowed=255, allowed file permission bits, default 4  
net.tux.mode\_forbidden=2, forbidden file permission bits, default 0  
net.tux.documentroot=/www, document root for web server, default /var/www/tux  
net.tux.logging=1, enable logging, default off

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## Notes/Tuning Information (Continued)

### HTTP Software Notes (Continued)

net.tux.0.listen.0=836664f5, tie NIC to first TUX thread, default 0  
net.tux.1.listen.0=836764f5, tie NIC to second TUX thread, default 0  
net.tux.1.listen.1=836564f5, tie NIC to second TUX thread, default 0

### Network Notes

txqueuelen=20000, transmit queue length, default 100  
irq.5.smp\_affinity=01, lock IRQ of NIC to first processor, default 0xffffffff  
irq.11.smp\_affinity=02, lock IRQ of NIC to second processor, default 0xffffffff  
irq.15.smp\_affinity=02, lock IRQ of NIC to second processor, default 0xffffffff  
Alteon NIC settings in /usr/src/linux/drivers/net/acenic.c  
tx\_coal\_tick = 300, default 400  
rx\_coal\_tick = 300, default 120  
max\_tx\_desc = 64, default 60  
max\_rx\_desc = 32, default 25