

# SPECweb99 Result

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Hewlett-Packard Company: ProLiant ML370 G3  
Red Hat: Red Hat Content Accelerator 2

SPECweb99 = 5373

Test Date: Mar-2003  
Tester: Hewlett-Packard Company

Hardware Avail: May-2003 OS Avail: Nov-2002 HTTP Software Avail: Nov-2002 Sup. Software Avail: Nov-2002 SPEC license #: 3

## Hardware

Vendor: Hewlett-Packard Company  
Model: ProLiant ML370 G3  
Processor: 3060MHz Intel Xeon  
# Processors: 2 cores, 2 chips, 1 core/chip (Hyper-Threading enabled)  
Primary Cache: 12KB Execution and 8KB Data on chip  
Secondary Cache: 512KB  
Other Cache: None  
Memory: 12 GB  
Disk Subsystem: 6x36.4GB SCSI  
Disk Controllers: HP Smart Array 5312 Controller  
Other Hardware: Anritsu MultiFlow 5128 Switch

## Software

Operating System: Red Hat Linux 8.0  
File System: ext2  
Other Software: Intel 4.4.19 driver

## HTTP Software

Vendor: Red Hat  
HTTP Software: Red Hat Content Accelerator 2  
API: RHCA user API  
Server Cache: None  
Log Mode: Binary CLF

## Test Sponsor

Test Date: Mar-2003  
Tested By: Hewlett-Packard Company  
SPEC License: 3

## Network

# of Controllers: 4  
Network Controllers: Intel Pro/1000 MT Server Adapter  
# of Nets: 4  
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: 16  
Model: Compaq Proliant DL380  
Processor: 1.0GHz Intel Pentium III  
# of Processors: 2  
Memory: 128MB  
Network Controller: Alteon ACENIC 1000SX  
Operating System: Red Hat 7.3  
Compiler: gcc 2.96

## Notes/Tuning Information

### SUT Notes

1 disk for OS and logs  
5 disks (1 logical HW 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=131071, default receive socket buffer size, default 65535  
net.core.rmem\_max=131071, 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=300000, 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=10000000 10000000 10000000, maximum TCP read-buffer space allocatable, default 4096 87380 174760  
net.ipv4.tcp\_wmem=10000000 10000000 10000000, maximum TCP write-buffer space allocatable, default 4096 16384 131072  
net.ipv4.tcp\_mem=10000000 10000000 10000000, maximum TCP buffer space allocatable, default 195584 196096 196608  
net.ipv4.tcp\_timestamps=0, turns TCP timestamp support off, default on  
net.ipv4.ip\_nonlocal\_bind=1, allows processes to bind to non-local IP addresses  
net.ipv4.tcp\_sack=0, turn SACK support off, default on  
net.ipv4.tcp\_window\_scaling=0, turn TCP window scaling support off, default on  
File systems mounted with "noatime,nodiratime", no inode access time updating  
One NIC bound per logical CPU (Hyper-Threading enabled)

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## Notes/Tuning Information (Continued)

### 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=/web, document root for web server, default /var/www/tux  
net.tux.logging=1, enable logging, default off  
net.tux.threads=4, sets number of TUX threads, default 2  
net.tux.max\_backlog=3000,maximum per-listening-socket TCP backlog size, default 2048  
net.tux.noid=1, suppress the Server id string, default 0  
net.tux.generate\_etags=0, don't generate ETag header, default 1  
net.tux.generate\_last\_mod=0, don't generate Last-Modified header, default 0

### Network Notes

txqueuelen=20000, transmit queue length, default 100  
One Network bound to each TUX thread

### Client Notes

net.ipv4.ip\_local\_port\_range = 1024 65535

### Other Notes

Tuning Disclosure: See Above  
Dynamic API: HP-20030303-RHCA.tar.gz  
Kernel config: HP-20030303-ML370G3-config.txt