

# SPECweb99 Result

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Dell: PowerEdge 2650  
Red Hat: Red Hat Content Accelerator 2

SPECweb99 = 4130

Test Date: Mar-2002  
Tester: Dell

Hardware Avail: May-2002 OS Avail: Oct-2001 HTTP Software Avail: Feb-2002 Sup. Software Avail: Feb-2002 SPEC license #: 55

## Hardware

Vendor: Dell  
Model: PowerEdge 2650  
Processor: 2.40 GHz Pentium Xeon  
# Processors: 2 cores, 2 chips, 1 core/chip (Hyper-Threading enabled)  
Primary Cache: 12KBI+8KBD on chip  
Secondary Cache: 512KB ATC  
Other Cache: None  
Memory: 6 GB  
Disk Subsystem: 5 18GB 10KRPM drives  
Disk Controllers: Onboard Adaptec 7899  
Other Hardware: 2 Dell PowerConnect 5012  
4 Nortel ACEswitch 180

## Software

Operating System: Red Hat Linux 7.2  
File System: ext2  
Other Software: RHA-2002-028, Intel 4.1.7 driver

## HTTP Software

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

## Test Sponsor

Test Date: Mar-2002  
Tested By: Dell  
SPEC License: 55

## Network

# of Controllers: 4  
Network Controllers: 3 Intel PRO/1000 XT, 1 Broadcom 5701 LOM  
# 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: Dell Precision 410  
Processor: 450MHz Pentium II  
# of Processors: 2  
Memory: 128MB  
Network Controller: 3Com 3C985B-SX  
Operating System: Red Hat Linux 7.2  
Compiler: gcc 2.96

## Notes/Tuning Information

### SUT Notes

1 disk for OS and logs  
4 disk software RAID0 stripe for fileset

### Operating System Notes

ulimit -n 10000, sets number of open files, default 1024  
One NIC bound per logical CPU (Hyper-Threading enabled)  
Each NIC's TX queue length set to 20000 via ifconfig, default 1000  
File systems mounted with "noatime,nodiratime", no inode access time updating  
net.ipv4.nonlocal\_bind = 1, allows processes to bind to non-local IP addresses  
net.ipv4.tcp\_timestamps = 0, turns TCP timestamp support off, default on  
net.ipv4.tcp\_max\_tw\_buckets = 2000000, sets TCP time-wait buckets pool size, default 180000  
net.ipv4.tcp\_rmem = 1000000 1000000 1000000, sets min/default/max TCP read buffer, default 4096 87380 174760  
net.ipv4.tcp\_wmem = 1000000 1000000 1000000, sets min/pressure/max TCP write buffer, default 4096 16384 131072  
net.ipv4.tcp\_mem = 1000000 1000000 1000000, sets min/pressure/max TCP buffer space, default 31744 32256 32768  
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  
net.core.hot\_list\_length = 300000, maximum number of skb-heads to be cached, default 128  
net.core.rmem\_max = 1000000, maximum receive socket buffer size, default 131071  
net.core.wmem\_max = 1000000, maximum send socket buffer size, default 131071  
net.core.rmem\_default = 1000000, default receive socket buffer size, default 65535  
net.core.wmem\_default = 1000000, default send socket buffer size, default 65535  
net.core.wmem\_default = 1000000, default send socket buffer size, default 65535  
net.core.optmem\_max = 1000000, maximum amount of option memory buffers, default 10240  
net.core.netdev\_max\_backlog = 300000, number of unprocessed input packets before kernel starts dropping them, default 300  
Kernel parameters:  
idle=poll, idle threads poll reschedule flag, default is to use HLT instruction

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## Notes/Tuning Information (Continued)

### Operating System Notes (Continued)

acpism=force, use ACPI tables for processor information, default MP table

### HTTP Software Notes

One network bound per TUX thread

net.tux.logging = 1, turns on logging of requests, default 0

net.tux.cgiroot = /, cgi root check, default /var/www/tux/cgiroot/

net.tux.cgi\_uid = 99, uid 'nobody' for cgi scripts; default -1

net.tux.cgi\_gid = 99, gid 'nobody' for cgi scripts; default -1

net.tux.max\_backlog = 3000, maximum per-listening-socket TCP backlog size, default 2048

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

net.tux.noid = 1, suppress the Server id string, default 0

### Client Notes

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

### Other Notes

Tuning Disclosure: See above.

Dynamic API: Dell-20020204-RHCA.tar.gz

Kernel config: PE4600.config in Dell-20020204-RHCA.tar.gz