

# SPECweb99 Result

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Dell: PowerEdge 4400/800  
Red Hat: TUX 1.0

SPECweb99 = 2200

Test Date: Jun-2000  
Tester: Dell

Hardware Avail: Apr-2000 OS Avail: Sep-2000 HTTP Software Avail: Sep-2000 Sup. Software Avail: Sep-2000 SPEC license #: 55

## Hardware

Vendor: Dell  
Model: PowerEdge 4400/800  
Processor: 800MHz Pentium III Xeon  
# Processors: 2 cores, 2 chips, 1 core/chip  
Primary Cache: 16KBI+16KBD on chip  
Secondary Cache: 256KB ATC  
Other Cache: None  
Memory: 4 GB  
Disk Subsystem: 5 9GB 10KRPM drives  
Disk Controllers: Onboard Adaptec AIC-7899 SCSI  
Other Hardware: 2 Alteon ACEswitch 180

## Software

Operating System: Red Hat Linux 6.2 Threaded Web Server Add-On  
File System: ext2  
Other Software: None

## HTTP Software

Vendor: Red Hat  
HTTP Software: TUX 1.0  
API: TUX user API  
Server Cache: None  
Log Mode: Binary CLF

## Test Sponsor

Test Date: Jun-2000  
Tested By: Dell  
SPEC License: 55

## Network

# of Controllers: 2  
Network Controllers: Alteon AceNIC 1000SX  
# of Nets: 2  
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: 12  
Model: Dell Precision 410  
Processor: 450MHz Pentium II  
# of Processors: 2  
Memory: 128MB  
Network Controller: Alteon AceNIC 1000SX  
Operating System: Windows 2000 Professional  
Compiler: Microsoft Visual C++ 6.0

## Notes/Tuning Information

### SUT Notes

1 disk for OS and logs  
4 disk software RAID0 stripe, using 2MB chunk size, for fileset.

### Operating System Notes

net.ipv4.ip\_forward = 0, disables packet forwarding, default 1  
net.ipv4.conf.all.rp\_filter = 1, enables source route verification, default 0  
net.ipv4.tcp\_timestamps = 0, turns TCP timestamp support off, default on  
net.ipv4.tcp\_sack = 0, turns SACK support off, default on  
net.ipv4.tcp\_window\_scaling = 0, turn TCP window scaling support off, default on  
net.ipv4.tcp\_max\_tw\_buckets = 2000000, sets TCP time-wait buckets pool size, default 180000  
net.ipv4.ip\_local\_port\_range = 16384 65536, default 32768 61000  
net.core.rmem\_max = 10485760, maximum receive socket buffer size, default 65535  
net.core.wmem\_max = 10485760, maximum send socket buffer size, default 65535  
net.core.rmem\_default = 10485760, default receive socket buffer size, default 65535  
net.core.wmem\_default = 10485760, default send socket buffer size, default 65535  
fs.file-max = 40960, maximum number of open files, default 8192  
vm.bdflush = 100 5000 640 2560 150 30000 5000 1884 2 (see tuning description file)  
vm.freepages = 16384 32768 65536 (see tuning description file)  
Alteon tx\_coal\_tick = 300, default 0 (not set)  
Alteon rx\_coal\_tick = 300, default 0 (not set)  
See .config file for kernel build information  
Tested TUX version based on 2.3 kernel, released version based on 2.4 kernel

### Client Notes

Tcpip/Parameters/MaxUserPort = 0xffff, sets maximum open ports to 65534.

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## Notes/Tuning Information (Continued)

### Other Notes

TUX Configuration:

Each NIC IRQ bound to a different CPU.

Each TUX thread's listening address bound to 1 NIC's associated network

net.tux.threads = 2, sets number of TUX threads, default 2

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

net.tux.logentry\_align\_order = 0, sets alignment of log entry records in logfile, default 5

net.tux.mode\_allowed = 255, allowed file-permission bits, default 00004

net.tux.mode\_forbidden = 2, forbidden file-permission bits, default 00000

net.tux.max\_cached\_filesize = 100000000, maximum size of cached object, default 100000

net.tux.serverport = 80