

# SPECweb99 Result

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IBM: eServer xSeries 342  
Red Hat: TUX 2.0

SPECweb99 = 3227  
Test Date: Jun-2001  
Tester: IBM

Hardware Avail: Jun-2001 OS Avail: Apr-2001 HTTP Software Avail: Apr-2001 Sup. Software Avail: Apr-2001 SPEC license #: 11

## Hardware

Vendor: IBM  
Model: eServer xSeries 342  
Processor: 1.133 GHz Pentium III  
# Processors: 2 cores, 2 chips, 1 core/chip  
Primary Cache: 16KBI+16KBD on chip  
Secondary Cache: 512KB  
Other Cache: none  
Memory: 4GB  
Disk Subsystem: 6 X 18GB (IBM 19K1638)  
Disk Controllers: Onboard Adaptec  
Other Hardware: 4 X ALTEON ACESwitch 180 GbE Switch

## Software

Operating System: RedHat 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: IBM  
SPEC License: 11

## Network

# of Controllers: 4  
Network Controllers: Alteon ACEnic PCI-SX  
# 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: 20  
Model: IBM eServer xSeries 330  
Processor: 933Mhz Pentium III  
# of Processors: 1  
Memory: 256MB  
Network Controller: Alteon ACEnic PCI-SX  
Operating System: Windows 2000 Professional  
Compiler: Microsoft Visual C++ 6.0

## Notes/Tuning Information

### SUT Notes

- 1 disk for OS and logs
- 5 disk software RAID1, for web pages

### Operating System Notes

- Tuning parameters:
- net.ipv4.ip\_forward=1, default 0
  - net.ipv4.conf.all.rp\_filter = 1, enables source route verification, default 0
  - net.ipv4.tcp\_timestamps = 0, turns TCP timestamp support off, default 1
  - net.ipv4.tcp\_max\_tw\_buckets = 2000000, sets TCP time-wait buckets pool size, default 180000
  - net.core.rmem\_max = 10000000, maximum receive socket buffer size, default 65535
  - net.core.rmem\_default = 10000000, default receive socket buffer size, default 65535
  - net.core.wmem\_max = 10000000, maximum send socket buffer size, default 65535
  - net.core.wmem\_default = 10000000, default send socket buffer size, default 65535
  - net.core.optmem\_max = 10000000, default 10240
  - 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 the kernel starts dropping them, default 300
  - 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, default 31744 32256 32768
  - net.ipv4.ip\_nonlocal\_bind = 1, Allow applications to bind to a non-local address, default 0
- See config file for kernel build information

### HTTP Software Notes

- TUX Configuration
- net.tux.logging = 1, turns on logging, default 0
  - net.tux.mode\_allowed = 255, allowed file-permission bits, default 00004
  - net.tux.mode\_forbidden = 2, forbidden file-permission bits, default 00000

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## Notes/Tuning Information (Continued)

### HTTP Software Notes (Continued)

- net.tux.mode\_cgi = 32841
- net.tux.cgiroot = /
- net.tux.logfile = /http/tmp/tux

### HTTP API Notes

Tux API from IBM-20010626.tar.gz