

# SPECweb99 Result

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Hewlett-Packard Co.: HP Netserver LP 2000r  
Microsoft: IIS 5.0 and SWC 3.0

SPECweb99 = 2499

Test Date: Mar-2001  
Tester: Hewlett-Packard Company

Hardware Avail: Mar-2001 OS Avail: May-2001 HTTP Software Avail: May-2001 Sup. Software Avail: May-2001 SPEC license #: 3

## Hardware

Vendor: Hewlett-Packard Co.  
Model: HP Netserver LP 2000r  
Processor: Intel Pentium III at 1Ghz  
# Processors: 2 cores, 2 chips, 1 core/chip  
Primary Cache: 16KBI+16KBD on chip  
Secondary Cache: 256KB on chip  
Other Cache: none  
Memory: 4 GB  
Disk Subsystem: 6 18GB 15K Ultra3 SCSI  
Disk Controllers: Integrated Ultra3 SCSI  
Other Hardware: 3 Alteon ACEswitch 180

## Software

Operating System: Windows 2000 Advanced Server with SP2  
File System: NTFS  
Other Software: TCP/IP hotfix Q298896;  
3c985d1.exe driver from www.3com.com

## HTTP Software

Vendor: Microsoft  
HTTP Software: IIS 5.0 and SWC 3.0  
API: TWC 3.0  
Server Cache: None  
Log Mode: Binary CLF

## Test Sponsor

Test Date: Mar-2001  
Tested By: Hewlett-Packard Company  
SPEC License: 3

## 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: 9  
Model: HP Kayak XU  
Processor: Intel Pentium II at 550MHz  
# of Processors: 2  
Memory: 256MB  
Network Controller: Alteon AceNIC 1000SX  
Operating System: Microsoft Windows 2000 Pro  
Compiler: Microsoft C++ Version 6

## Notes/Tuning Information

### Operating System Notes

Tuning parameters:

- Control/FileSystem/NtfsDisableLastAccessUpdate=1, prevents updating LastAccess time stamp
- Control/Session Manager/Memory Management/LargeSystemCache=0, limits system cache, default 1
- Control/Session Manager/Memory Management/SystemPages=0xffffffff, sets system pages.
- Tcpi/Parameters/DisableLargeSendOffload=0, enable large sends for TCP/IP
- Tcpi/Parameters/MaxFreeTWTcbs=1098000, sets maximum number of TIME\_WAIT tcbs to 1,098,000
- Tcpi/Parameters/MaxHashTableSize=0x10000, sets TCB hash table size to 65,536 entries, default 512
- Tcpi/Parameters/MaxSendSegments=0x1000, max TCP segments sent consecutively to a destination, default 64
- Tcpi/Parameters/MaxUserPort=0xffff, sets maximum open ports to 65534
- Tcpi/Parameters/NumTcbTablePartitions=64, sets number of independent TCB table segments, default 4
- Tcpi/Parameters/TcpTimedWaitDelay=60, sets TIME\_WAIT parameter to 60 seconds (non-RFC 1122), default is 240
- Tcpi/Parameters/TcpWindowSize=65535, sets TCP send/receive window size, default 8192

Alteon NIC settings in registry:

- PciReadMax=128, sets maximum number of bytes per PCI read burst, default 0xffffffff
- LargeSend=1, enables large sends
- HybridLen=54, threshold in bytes that the driver decides to DMA versus copy, default 128
- HostTracing=0 (off), disables NIC driver logging events, default 1 (on).

### Hardware Notes

One 18GB 15Krpm disk for OS, logs, and paging; five 18GB 15Krpm OS-striped disks for web pages.

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## Notes/Tuning Information (Continued)

### Client Notes

- Tcip/Parameters/MaxUserPort = 0xffffe, sets maximum open ports to 65534

### Other Notes

SWC 3.0 Configuration:

- Use Intfiltr to bind NIC IRQ to a different CPU.
- SWC/Parameters/LogDrive=C, puts log file on C: drive.
- SWC/Parameters/LogFileInitialSize=0xffffffff, sets initial log file size to 4 gigabytes.
- SWC/Parameters/VirtualRootName=spec99, sets virtual directory name to spec99.
- SWC/Parameters/VirtualRootPath=D:\Specw99, sets physical path where files are located.
- SWCParameters/SmallCachingThreshold=500, max size for small files (bytes), default system-dependent.
- SWC/Parameters/LargeCachingThreshold=930000, max size for cached files (bytes), default system-dependent.
- SWC/Parameters/SmallBufferSize=0x40, memory for caching small files (MB), default system-dependent.
- SWC/Parameters/LargeBufferSize=0xA28, memory for caching large files (MB), default system-dependent.
- SWC/Parameters/SwcLockedMemorySize=0x80, size of locked memory for SWC ops (MB), default system-dependent.