

# SPECweb99 Result

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Dell: PowerEdge 1650  
Microsoft: IIS 5.0

SPECweb99 = 1588

Test Date: Jan-2002  
Tester: Dell

Hardware Avail: Feb-2002 OS Avail: Feb-2000 HTTP Software Avail: Feb-2000 Sup. Software Avail: Nov-2001 SPEC license #: 55

## Hardware

Vendor: Dell  
Model: PowerEdge 1650  
Processor: 1.4GHz Pentium III  
# Processors: 2 cores, 2 chips, 1 core/chip  
Primary Cache: 16KBI+16KBD on chip  
Secondary Cache: 512KB ATC  
Other Cache: None  
Memory: 4 GB  
Disk Subsystem: 3 72GB 10KRPM drives  
Disk Controllers: Onboard Adaptec SCSI  
Other Hardware: Nortel ACEswitch 180, Intel NetStructure 470T

## Software

Operating System: Windows 2000 Advanced Server  
File System: NTFS  
Other Software: SP2, Q298896, Intel 3.1 driver

## HTTP Software

Vendor: Microsoft  
HTTP Software: IIS 5.0  
API: ISAPI  
Server Cache: None  
Log Mode: W3C Extended Log File Format

## Test Sponsor

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

## Network

# of Controllers: 1  
Network Controllers: Onboard Intel 82544EI XT  
# of Nets: 1  
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: 7  
Model: Dell Precision 410  
Processor: 450MHz Pentium II  
# of Processors: 2  
Memory: 128MB  
Network Controller: 3Com 3C985B-SX  
Operating System: Windows 2000 Professional  
Compiler: Microsoft Visual C++ 6.0

## Notes/Tuning Information

### Operating System Notes

Registry tunes:

- AFD/Parameters/TransmitWorker=32, adjusts system default thread, default 16.
- Control/FileSystem/NtfsDisableLastAccessUpdate=1, prevents updating LastAccess time stamp on NTFS directories.
- Control/Session Manager/Memory Management/IOPageLockLimit=65536, increases I/O pages limit to 64MB, default 512KB.
- Tcbip/Parameters/NumTcbTablePartitions=16, sets number of independent TCB table segments, default 4.
- Tcbip/Parameters/MaxHashTableSize=0x10000, sets TCB hash table size to 65,536 entries, default is 512.
- Tcbip/Parameters/TcpTimedWaitDelay=0x3c, sets TIME\_WAIT parameter to 60 seconds (non-RFC 1122), default is 240.
- Tcbip/Parameters/MaxFreeTwTcbs=400000, sets maximum number of TIME\_WAIT tcbs to 400,000.
- Tcbip/Parameters/MaxUserPort=0xffff, sets maximum open ports to 65534.
- Tcbip/Parameters/TcpWindowSize=17520, sets TCP send/receive window size, default 8192.
- NDIS/Parameters/ProcessorAffinityMask=0, forces processor that handled interrupt to also handle that DPC, default is any processor.

Intel NIC settings:

- NumTxDescriptors=4096, number of descriptors to send packets, default 256.
- TcpSegmentation=1, enables TCP segmentation offload, default 0.
- NumCoalesceBuffers=768, number of coalesce buffers for transmit acceleration, default 128.
- FlowControl=0, disables flow control, default 1.
- ChecksumRxTcp=1, offloads RX checksums to NIC, default 0.

### HTTP Software Notes

IIS settings: maximum performance.

IIS Home Directory: Access for Read & Write, Scripts & Executables.

IIS Virtual Directory spec99 points back to web server root, low application protection.

- Inetinfo/Parameters/ObjectCacheTTL=0xffffffff, sets IIS object cache timeout, default 10 minutes
- Inetinfo/Parameters/ListenBackLog=1000, default 25.
- Inetinfo/Parameters/AcceptExTimeout=1, sets time for accept ex socket to wait for receive, default 120.
- Inetinfo/Parameters/MaxPoolThreads=20, maximum network request threads per processor, default 10.

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## Notes/Tuning Information (Continued)

### Hardware Notes

One disk OS and logs, 2 disk SW RAID-0 stripe for file set and logs.

### Other Notes

Tuning Disclosure: See above  
Dynamic API: Dell-19991214.zip