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.
- Tcpip/Parameters/NumTcbTablePartitions=16, sets number of independent TCB table segments, default 4.
- Tcpip/Parameters/MaxHashTableSize=0x10000, sets TCB hash table size to 65,536 entries, default is 512.
- Tcpip/Parameters/TcpTimedWaitDelay=0x3c, sets TIME_WAIT parameter to 60 seconds (non-RFC 1122), default is 240.
- Tcpip/Parameters/MaxFreeTwTcbs=400000, sets maximum number of TIME_WAIT tcbs to 400,000.
- Tcpip/Parameters/MaxUserPort=0xfffe, sets maximum open ports to 65534.
- Tcpip/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=0xffffff, 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