SPECweb99 Result

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Dell: PowerEdge 2550
Microsoft: Internet Information Server 5.0

SPECweb99 = 1454

Test Date: Sep-2001
Tester: Dell

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

Hardware

Vendor:	Dell
Model:	PowerEdge 2550
Processor:	1.26GHz 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:	1 9GB 15K RPM, 4 18GB 15KRPM drives
Disk Controllers:	Onboard Adaptec 7899
Other Hardware:	1 Alteon ACEswitch 180

Software

Operating System:	Windows 2000 Server SP2
File System:	NTFS
Other Software:	None

HTTP Software

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

Test Sponsor

Test Date:	Sep-2001
Tested By:	Dell
SPEC License:	55

Network

# of Controllers:	1
Network Controllers:	Intel Gigabit 1000SX
# 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:	5
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

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.

Operating System Notes

IntFilter tool used to bind NIC IRQ to first CPU.
Tuning parameters:
- AFD/Parameters/TransmitWorker = 32, adjusts system default thread, default 16.
- Control/FileSystem/NtfsDisableLastAccessUpdate = 1, prevents updating LastAccess time stamp on NTFS directories, default 0.
- 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.
- NDIS/Parameters/ProcessorAffinityMask = 0, forces processor that handled interrupt to also handle that DPC, default any processor.
- Tcpip/Parameters/MaxHashTableSize=0x10000, sets TCB hash table size to 65,536 entries, default is 512.
- 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/NumTcbTablePartitions = 16, sets number of independent TCB table segments, default 4.
- Tcpip/Parameters/TcpTimedWaitDelay = 0x3c, sets TIME_WAIT parameter to 60 seconds (non-RFC 1122), default is 240.
- Tcpip/Parameters/TcpWindowSize = 17520, sets TCP send/receive window size, default 8192.

Intel NIC registry settings:
- NumTxDescriptors = 768, Number of buffers available for transmit acceleration, default 256.
- ChecksumRxTcp = 1, offloads RX checksums to NIC, default 0.

HTTP API Notes

Microsoft ISAPI for IIS 5.0 compiled with VC++ 6.0.

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Notes/Tuning Information (Continued)

Hardware Notes

One 9GB disk for OS and logs, 4 18GB disks striped for web pages

Other Notes

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