SPECweb99 Result

© Copyright 1999, Standard Performance Evaluation Corporation

Dell: PowerEdge 1650
Microsoft: IIS 5.0

SPECweb99 = 1810

Test Date: Feb-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:	1 Dell PowerConnect 5012

Software

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

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:	Feb-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:	500MHz Pentium III
# of Processors:	2
Memory:	128MB
Network Controller:	Broadcom NetXtreme GbE
Operating System:	Windows 2000 Professional SP2
Compiler:	Microsoft Visual C++ 6.0

Notes/Tuning Information

SUT Notes

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

Operating System Notes

NIC bound to first CPU via IntFiltr
App response optimized for applications, default background services
Registry tunes:
- Control/FileSystem/NtfsDisableLastAccessUpdate=1, prevents updating LastAccess time stamp on NTFS directories
- Tcpip/Parameters/NumTcbTablePartitions=32, sets number of independent TCB table segments, default 4
- Tcpip/Parameters/MaxHashTableSize=0x10000, sets TCB hash table size to 65,536 entries, default 512
- Tcpip/Parameters/TcpTimedWaitDelay=0x3c, sets TIME_WAIT parameter to 60 seconds (non-RFC 1122), default 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 any processor

Intel NIC:
- NumTxDescriptors=4096, number of descriptors to send packets, default 256
- TcpSegmentation=1, enables TCP segmentation offload, default 0
- 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

© Copyright 1999, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

HTTP Software Notes (Continued)

- Inetinfo/Parameters/MaxPoolThreads=4, maximum network request threads per processor, default 10
- Inetinfo/Parameters/PoolThreadLimit=8, sets total pool threads per system, default 2*MB RAM

Client Notes

NIC settings:
- Flow Control=Auto, default None
- RxCoalescingTicks=0, interrupt when RxMaxCoalescedFrames reached, default 360
- RxMaxCoalescedFrames=40, received frames before interrupt generated, default 15
- RxStdDescCnt=400, receive descriptors, default 200

Other Notes

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