SPECweb99 Result

© Copyright 1999, Standard Performance Evaluation Corporation

Dell: PowerEdge 8450/700
Microsoft: IIS 5.0 and SWC 3.0

SPECweb99 = 8001

Test Date: Apr-2001
Tester: Dell

Hardware Avail:	Jun-2000	OS Avail:	May-2001	HTTP Software Avail:	May-2001	Sup. Software Avail:	Jun-2001	SPEC license #:	55

Hardware

Vendor:	Dell
Model:	PowerEdge 8450/700
Processor:	700MHz Pentium III Xeon
# Processors:	8 cores, 8 chips, 1 core/chip
Primary Cache:	16KBI+16KBD on chip
Secondary Cache:	2MB(I+D)
Other Cache:	None
Memory:	32 GB
Disk Subsystem:	7 9GB 10KRPM drives, 1 18GB 15K RPM drive
Disk Controllers:	Onboard Symbios SCSI
Other Hardware:	8 Alteon ACEswitch 180

Software

Operating System:	Windows 2000 Datacenter Server
File System:	NTFS
Other Software:	SP2, 3Com driver, TCPIP, & NDIS hotfixes

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:	Apr-2001
Tested By:	Dell
SPEC License:	55

Network

# of Controllers:	8
Network Controllers:	3Com 3C985B-SX
# of Nets:	8
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:	34
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

SUT Notes

1 disk for OS, 1 disk for logs
6 disk software RAID0 stripe for fileset.

Operating System Notes

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

NIC registry settings:
- 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).

Windows 2000 SP2, 3C985-SX driver, NDIS and TCPIP hotfixes available May 2001.

HTTP Software Notes

- TWC CAD buffers=1024, default not set.
- CGI-Gateway buffers=48, default not set.

SPECweb99 Result

© Copyright 1999, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

Client Notes

Tcpip/Parameters/MaxUserPort = 0xfffe, sets maximum open ports to 65534.

Other Notes

SWC 3.0 Configuration:
7 NIC IRQs bound to different CPUs, 1 NIC bound across 4 CPUs, CGI bound to 8th CPU.
SWC/Parameters/LogDrive=G, puts log file on G: 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=F:wwwroot99, sets physical path where files are located.
SWC/Parameters/SmallCachingThreshold=500, max size for small files (bytes), default system-dependent.
SWC/Parameters/LargeCachingThreshold=1200000, 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=0x6590, memory for caching large files (MB), default system-dependent.
SWC/Parameters/SwcLockedMemorySize=0x80, size of locked memory for SWC ops (MB), default system-dependent.