SPECweb99 Result

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Fujitsu Siemens Computers: Primergy H400
Microsoft: Internet Information Server 5.0

SPECweb99 = 1186

Test Date: Sep-2000
Tester: Fujitsu Siemens

Hardware Avail:	Jul-2000	OS Avail:	Feb-2000	HTTP Software Avail:	Feb-2000	Sup. Software Avail:	Feb-2000	SPEC license #:	22

Hardware

Vendor:	Fujitsu Siemens Computers
Model:	Primergy H400
Processor:	700 MHz Pentium III Xeon
# Processors:	2 cores, 2 chips, 1 core/chip
Primary Cache:	16KBI+16KBD on chip
Secondary Cache:	2MB
Other Cache:	none
Memory:	8 GB
Disk Subsystem:	7 x 9GB (FUJITSU MAG3091LC)
Disk Controllers:	1 Mylex DAC1164P
Other Hardware:	3Com SuperStackII Switch 9300SX

Software

Operating System:	Microsoft Windows 2000 Advanced Server
File System:	NTFS
Other Software:	None

HTTP Software

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

Test Sponsor

Test Date:	Sep-2000
Tested By:	Fujitsu Siemens
SPEC License:	22

Network

# of Controllers:	2
Network Controllers:	Alteon ACEnic PCI 1000Base-SX
# of Nets:	2
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:	8
Model:	Scenic 800
Processor:	550 MHz Pentium III
# of Processors:	1
Memory:	128 MB
Network Controller:	Intel PRO/1000
Operating System:	Microsoft Windows 2000 Professional
Compiler:	Microsoft Visual C++ 6.0

Notes/Tuning Information

Operating System Notes

TCP/IP registry tuning parameters (HKLMSystemCurrentControlSetServicesTcpipParameters\
- MaxHashTableSize=0x4000, sets TCB hash table size to 16384 entries, default is 512.
- TcpTimedWaitDelay=0x3c, sets TIME_WAIT parameter to 60 seconds (non-RFC 1122), default is 240.
- MaxFreeTwTcbs=400000, sets maximum number of TIME_WAIT tcbs to 400,000.
- MaxFreeTcbs=0x16000, sets number of cached (pre-allocated) TCBs, default 1000
- MaxUserPort = 0xfffe, sets maximum open ports to 65534.
- TcpWindowSize = 65535, sets TCP send/receive window size, default 8192.
- NumTcbTablePartitions = 32, sets number of independent TCB table segments, default 4.

IIS registry tuning parameters (HKLMSystemCurrentControlSetServicesInetinfoParameters\
- ObjectCacheTTL=0xffffffff, sets IIS object cache timeout, default 10 minutes
- ListenBacklog=4000, default 25.
- AcceptExTimeout=1, sets time for accept ex socket to wait for receive, default 120.
- LogFileFlushInterval=60, forces flush every 60 seconds, default 300.
- MaxPoolThreads=2, maximum network request threads per processor, default 10.
- PoolThreadLimit=8, maximum pool threads in system, default 2*#MB.
- MemCacheSize=2000, sets the cache size for IIS, default is 50% of available memory.
- MaxCachedFileSize=1000000, sets the maximum file size (in bytes) that IIS will cache, default is 256KB.

Alteon NIC registry tuning parameters
(HKLMSystemCurrentControlSetControlClass{4D36E972-E325-11CE-BFC1-08002BE10318} 0):
- RxFlowControl=0 (off), default 1.
- Network interrupts affinitized one NIC per processor using Microsoft IntFiltr.

Boot parameters: /PAE boot option added in boot.ini file.
Instructs NTLDR to load PAE capable kernel (ntkrnlpa.exe) for addressing physical memory above 4GB.

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Notes/Tuning Information (Continued)

HTTP Software Notes

IIS: set for more than 100,000 hits/day
IIS Home Directory: Access: Read and Write, Execute Permissions: Scripts and Executables
IIS Logging: W3C Extended logging, defaults plus: bytes sent; minus: user agent, server port, server IP address, username
IIS Virtual Directory spec99 points back to web server root, low application protection

HTTP API Notes

Microsoft ISAPI V1.1 for IIS 5.0 compiled with VC++ 6.0, code optimization = Pentium Pro.

Hardware Notes

1 disk for OS and pagefile, default NTFS cluster size
2 disks RAID0 for logs, stripe size 64KB, NTFS cluster size 64KB
4 disks RAID0 for file_set, stripe size 64KB, NTFS cluster size 8KB

Client Notes

Intel PRO/1000 NIC settings
- Coalesce Buffers = 512, default 128
- Fast Transmit Completion = On, default Off
- Flow Control = Off, default On
- Receive Descriptors = 768, default 160
- Transmit Descriptors = 512, default 256