

# 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 (HKLM\System\CurrentControlSet\Services\Tcpip\Parameters\):

- 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 = 0xffff, 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 (HKLM\System\CurrentControlSet\Services\Inetinfo\Parameters\):

- 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

(HKLM\System\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0000):

- RxFlowControl=0 (off), default 1.
- Network interrupts affinity 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