```
============================================================================
                                            ||
 Dell : PowerEdge 8450/700                  ||    NC     SPECweb99
 Microsoft : IIS 5.0 and SWC 3.0            ||
                                            ||
============================================================================
```

        SPEC has determined that this result was not in compliance with the
        SPECweb99 run and reporting rules. Specifically, the result did not meet
        the 3 month availability requirement in the SPECweb99 run rules due to a
        change in availability of Microsoft SWC 3.0.

```
============================================================================
```

PERFORMANCE

```
                | Conforming Simultaneous
    Iteration   |      Connections
---------------+---------------------------
       1        |        NC
       2        |        NC
       3        |        NC
---------------+---------------------------
     Median     |        NC
```

```
============================================================================
                         Availability Dates
```

All Hardware	Jun-2000
HTTP Software	Mar-2001
Operating System	Mar-2001
Supplemental System	Mar-2001

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	1 9GB 10KRPM drive, 8 16GB 15K RPM drives
Disk Controllers	Onboard Symbios SCSI
Other Hardware	7 Alteon ACEswitch 180

Software

Operating System	Windows 2000 Datacenter Server
File System	NTFS
Other Software	New TCP/IP & Alteon driver 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	Dec-2000
Tested By	Dell
SPEC License	55

Network

# of Controllers	7
Network Controllers	Alteon AceNIC 1000SX
# of Nets	7
Type of Nets	Gigabit Ethernet
Network Speed	1Gb/s
MSL (sec)	30 (Non RFC1122)
Time-Wait (sec)	60 (Non RFC1122)
MTU	1500

Clients

```
# of Clients            35
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

                        Benchmark Configuration

Requested Connections   7300
Fileset Size (MB)       23477.68

===============================================================================
                        Notes/Tuning information

SUT Notes
    1 disk for OS
    6 disk software RAID0 stripe for fileset, 2 disk software RAID0 stripe for logs.

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.
    Alteon NIC settings in registry:
    - 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).

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

Other Notes
    SWC 3.0 Configuration:
    Each NIC IRQ bound to a different 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.

===============================================================================


Test Run Details

    Run     Conforming  Percent  |  Throughput  Response  ops/sec/  Kbits/
    Num     Connections Conform  |  ops/sec     msec      loadgen   sec
 =>  1      NC          NC       |  NC          NC        NC        NC
     2      NC          NC       |  NC          NC        NC        NC
     3      NC          NC       |  NC          NC        NC        NC
```