

SPECweb99_SSL Result

```

=====
IBM : pSeries 630 Model 6C4 (1000MHz)      ||      NC SPECweb99_SSL
Zeus Technology Ltd. : Zeus 4.0r2         ||
=====
  
```

SPEC has determined that this result was not in compliance with the SPECweb99_SSL run and reporting rules. Specifically, the original tester has discovered that performance of the SUT shipped to customers did not achieve same results (within 5%) thus failing to meet the 3-month availability requirement.

New results for this hardware can be found at:
<http://www.spec.org/osg/web99ssl/results/res2002q3/web99ssl-20020819-00023.asc>

PERFORMANCE

Iteration	Conforming Simultaneous Connections
1	NC
2	NC
3	NC
Median	NC

Availability Dates

```

All Hardware      Aug-2002
HTTPS Software    Jan-2002
Operating System  Jul-2002
Supplemental System Jul-2002
  
```

Hardware

```

Vendor      IBM
Model       pSeries 630 Model 6C4 (1000MHz)
Processor    1000MHz POWER4
# Processors 4 cores, 4 chips, 1 core/chip
Primary Cache 64KBI+32KBD on chip
Secondary Cache 1.44MB unified on chip
Other Cache   32MB unified (of chip)/SCM, 2SCM in SUT
Memory        8 GB
Disk Subsystem 11x9.1GB 16Bit SCSI Disk,
                1x18.2GB 16bit SCSI Disk,
                1x36.4GB 16bit SCSI Disk
Disk Controllers 2 Wide/Ultra-3 SCSI I/O Controllers
Other Hardware 4 x Alteon ACESwitch 180
  
```

Software

```

Operating System AIX 5L V5.1(64bit)
File System       JFS2
Other Software    None
  
```

HTTPS Software

```

Vendor      Zeus Technology Ltd.
HTTPS Software Zeus 4.0r2
API         ISAPI
Server Cache None
Log Mode    Binary CLF for Zeus
  
```

Test Sponsor

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Test Date      May-2002
Tested By      IBM
SPEC License    11
  
```

Network

```

# of Controllers 4
Network Controllers 4 IBM Gigabit Ethernet-SX PCI Adapter
# of Nets        4
Type of Nets     Gigabit Ethernet
Network Speed    1 Gb/sec
MSL (sec)        30 (Non RFC1122)
Time-Wait (sec) 60 (Non RFC1122)
MTU              1500
  
```

Clients

```

# of Clients     8
Model            IBM eServer pSeries 640 Model B80
Processor        375 MHz POWER3-II
# of Processors  4
Memory          4GB
Network Controller 1 Gigabit Ethernet-SX PCI Adapter
Operating System AIX 4.3.3
Compiler         IBM Cset++ Version 5.1
  
```

Benchmark Configuration

```

Requested Connections 1050
Fileset Size (MB)     3479.44
  
```

Notes/Tuning information

SUT Notes
 APAR IY31315 was applied to AIX5L V5.1

```

bindintcpu [interrupt level] [cpu] (Interrupt affinity - bind 4 Ethernet interrupts to 4 CPU's(1 interrupt to 1 cpu))
bindprocessor [process] [cpu] (Process affinity - bind 4 Zeus child processes to 4 CPU's(1 process to 1 CPU))
maxpagehead=64(the maximum number of pages to be read ahead,default=8)
minperm=5%(the point below which the page-stealer will steal file of computational pages,default=20%)
maxperm=95%(the point above which the page stealing algorithm steals only file page,default=80%)
4 different logs for 4 zeus instances (1 log per zeus instance) for dynamic requests
Disk layout: 1 disk for OS, 1 disk for webserver, 10 disks striped for file_set,1 disk for weblog
Set Gigabit Ethernet driver attribute copy_bytes=256 (copy packet into contiguous buffer on transmit if this many or less bytes, default=2048)
Set Gigabit Ethernet driver attribute large_send=yes (turn on large_send capability of TCP/IP, default=no)
no(network option) tuning:
no -o tcp_sendspace=131072(default socket send buffer size, default=16384)
no -o tcp_recvspace=65536(default socket receive buffer size, default=16384)
no -o somaxconn=10240(max listen backlog, default=1024)
no -o tcp_timewait=5(ensure that TIME_WAIT is at least 60 seconds, default=1)
no -o tcp_newreno=0 (disables the modification to TCP's Fast Recovery algorithm as described in RFC 2582, default=1)

```

HTTP API Notes

```

Zeus PEPP-06 SPECweb99 toolkit used for dynamic content
post.log in /weblog directory instead of doc_root
./Configure --sendfile=no --locking=semop
Compiled with IBM VAC 5.0.1

```

Client Notes

```

APAR IY17356 was applied to AIX 4.3.3
no (network option) tuning:
no -o delayack=3(delay ack for connection setup and shutdown,default=0)
no -o delayackports={80}(delay ack ports,default={})
no -o tcp_timewait=5(ensure that TIME_WAIT is at least 60 seconds,default=1)
no -o tcp_sendspace=65536(default socket send buffer size, default=16384)
no -o tcp_recvspace=65536(default socket receive buffer size, default=16384)

```

Other Notes

```

Starts 4 unique instances of Zeus sharing a common docroot
The 1 child process of each Zeus instance bind to 1 unique IP address
Zeus 4.0 global.cfg (one per instance)
tuning!bind_any no
tuning!cache_files 100003
tuning!cache_large_file 1048576
tuning!cache_small_file 9216
tuning!cache_stat_expire 180000
tuning!cache_flush_interval 180000
tuning!cache_max_bytes 0
tuning!num_children 1
tuning!keepalive yes
tuning!ssl_keepalive yes
tuning!ssl_diskcache no
tuning!ssl_sessioncache_size 100003
tuning!keepalive_timeout 300
tuning!keepalive_max -1
tuning!listen_queue_size 9216
tuning!cbuff_size 1048576
tuning!multiple_accept yes
tuning!sendfile no
tuning!so_rbuff_size 32768
tuning!softservers no
tuning!unique_bind yes
tuning!use_poll no
tuning!cache_cooling_time 0
tuning!modules!cgi!cleansize 0
tuning!modules!cgi!cbuff_size 921632
tuning!modules!stats!enabled no
tuning!modules!nsapi!enabled no
Zeus_Site_Configuration (one per instance):
modules!cgi!enabled yes
modules!isapi!enabled yes
security!enabled yes
bindaddr ip_addr1
Tuning Disclosure: IBM-20011019.txt
Dynamic API: IBM-20011019_2-API.tar.gz

```

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

```