## SPECweb99 Result

**Compaq Computer Corp.: Alphaserver DS20E Model 68/833**

**Zeus Ltd: Zeus 4.0r1**

### SPECweb99 = 1943

- **Test Date:** Oct-2001
- **Tester:** Compaq
- **SPEC License:** 2

### Hardware

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Compaq Computer Corp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Alphaserver DS20E Model 68/833</td>
</tr>
<tr>
<td>Processor</td>
<td>833 MHz 21264B</td>
</tr>
<tr>
<td># Processors</td>
<td>2 cores, 2 chips, 1 core/chip</td>
</tr>
<tr>
<td>Primary Cache</td>
<td>64KBI+64KBD on chip</td>
</tr>
<tr>
<td>Secondary Cache</td>
<td>8MB off chip</td>
</tr>
<tr>
<td>Other Cache</td>
<td>none</td>
</tr>
<tr>
<td>Memory</td>
<td>4 GB</td>
</tr>
<tr>
<td>Disk Subsystem</td>
<td>14 x(Compaq BB00912301 9GB SCSI)</td>
</tr>
<tr>
<td>Disk Controllers</td>
<td>1 x Adaptec 7895 Adapter FW SCSI</td>
</tr>
<tr>
<td>Other Hardware</td>
<td>1 x ALTEON ACEswitch 180 GbE Switch</td>
</tr>
</tbody>
</table>

### SOFTWARE

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Compaq Tru64 UNIX V5.1A Spiked</th>
</tr>
</thead>
<tbody>
<tr>
<td>File System</td>
<td>UFS &amp; AdvFS</td>
</tr>
<tr>
<td>Other Software</td>
<td>Compaq C V6.4-009</td>
</tr>
</tbody>
</table>

### HTTP Software

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Zeus Ltd</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTTP Software</td>
<td>Zeus 4.0r1</td>
</tr>
<tr>
<td>API</td>
<td>ISAPI</td>
</tr>
<tr>
<td>Server Cache</td>
<td>none</td>
</tr>
<tr>
<td>Log Mode</td>
<td>Binary Log Format</td>
</tr>
</tbody>
</table>

### Test Sponsor

- **Test Date:** Oct-2001
- **Tester:** Compaq

### Test Sponsor

- **Test Sponsor:** Compaq

### Network

<table>
<thead>
<tr>
<th># of Controllers</th>
<th>1 x DEGPA-SA</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Nets</td>
<td>1</td>
</tr>
<tr>
<td>Type of Nets</td>
<td>Gigabit Ethernet</td>
</tr>
<tr>
<td>Network Speed</td>
<td>1 Gb/s</td>
</tr>
<tr>
<td>MSL (sec)</td>
<td>30 (Non RFC1122)</td>
</tr>
<tr>
<td>Time-Wait (sec)</td>
<td>60 (Non RFC1122)</td>
</tr>
<tr>
<td>MTU</td>
<td>1500</td>
</tr>
</tbody>
</table>

### Clients

- **# of Clients:** 4
- **Model:** Compaq DS20E
- **Processor:** 667MHz 21264
- **# of Processors:** 2
- **Memory:** 1GB
- **Network Controller:** DEGPA-SA
- **Operating System:** Compaq Tru64 UNIX V5.1
- **Compiler:** Compaq C V6.3-027

### Notes/Tuning Information

**SUT Notes**

**Operating System Notes**

- **Kernel (vmunix) tuning using Spike:**

  Spike is a tool that performs feedback-based code optimization on programs. To optimize the kernel a profile was taken using the Continuous Profiling Infrastructure (DCPI) tool while running a static HTTP workload. For details see the tuning disclosure.

  **OS Tuning parameters:**

  - vm:
    - swapdevice=/dev/disk/dsk0b
    - vm_swap_eager = 0
  - proc:
    - max_per_proc_address_space = 0x400000000000
    - max_per_proc_data_size = 0x400000000000
    - max_proc_per_user = 2048
    - max_threads_per_user = 0
    - per_proc_address_space = 0x400000000000
    - per_proc_data_size = 0x400000000000

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For more Information Contact SPEC info@spec.org http://www.spec.org
Operating System Notes (Continued)

inet:
ipqmaxlen = 2000
ipqs = 16
tcbhashnum = 16
tcbhashsize = 8192
tcp_sendspace = 1048576

net:
etisrthreads=2
netisrwakeupthreshold = 96

socket:
somaxconn = 32765
sominconn = 32765
umc = 1

vfs:
name_cache_hash_size = 16384
namei_cache_valid_time = 8400

alt:
minimal_isr=0

HTTP Software Notes

Zeus Tuning
runningsites/\lt;host\gt;: bindaddr text 10.76.76.76
global.cfg:
tuning!bind_any yes
tuning!cache_files 192461
tuning!cache_flush_interval 86400
tuning!cache_large_file 1048576
tuning!cache_max_bytes 0
tuning!cache_small_file 0
tuning!cache_stat_expire 86400
tuning!num_children 3
tuning!so_wbuff_size 1048576
tuning!softservers no
tuning!unique_bind no
tuning!use_poll no
tuning!cache_cooling_time 0
tuning!cbuff_size 65536
tuning!keepalive yes
tuning!keepalive_max -1
tuning!modules!isapi!writeclient_limit 104857600

Hardware Notes

Disk Configuration:
disk1: OS (/, /usr) [Controller 1]
disk2: URLroot (/www) [2]
disk3, disk9: http logging (log_dmn#log_fs) [1,2]
disk4-7, disk10-13 wwwdomain#file_set rw,noatimes [1,2]
Notes/Tuning Information (Continued)

**Hardware Notes (Continued)**

disk0: swap [1]

**Network Notes**

Network Tuning: N/A

**Client Notes**

max-proc-per-user = 0
proc:
maxusers = 1024
max-threads-per-user = 1024
socket:
sominconn = 32765
somaxconn = 32765
inet:
ipport_userreserved = 65000
tcp_recvspace = 60000

**Other Notes**

Tuning Disclosure: Compaq-20010614.txt
Dynamic API: Compaq-ES45-20011115-Z4.tar.gz