## SPECweb99 Result

**Advanced Micro Devices: Tyan S2882/Opteron 250**

**Red Hat: Red Hat Content Accelerator 3.2**

Test Date: Apr-2004  
Tester: Advanced Micro Devices  
SPEC License #: 49

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Test Sponsor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vendor:</td>
<td>Advanced Micro Devices</td>
</tr>
<tr>
<td>Model:</td>
<td>Tyan S2882/Opteron 250</td>
</tr>
<tr>
<td>Processor:</td>
<td>AMD Opteron 250, 2.4 GHz</td>
</tr>
<tr>
<td># Processors:</td>
<td>2 cores, 2 chips, 1 core/chip</td>
</tr>
<tr>
<td>Primary Cache:</td>
<td>64KB1+64KB</td>
</tr>
<tr>
<td>Secondary Cache:</td>
<td>1MB on chip</td>
</tr>
<tr>
<td>Other Cache:</td>
<td>None</td>
</tr>
<tr>
<td>Memory:</td>
<td>16 GB pc2700 DDR</td>
</tr>
<tr>
<td>Disk Subsystem:</td>
<td>5 36GB Ultra320 SCSI drives</td>
</tr>
<tr>
<td>Disk Controllers:</td>
<td>LSI MegaRAID SCSI 320-2X</td>
</tr>
<tr>
<td>Other Hardware:</td>
<td>4: Dell PowerConnect 5224</td>
</tr>
<tr>
<td>Software</td>
<td></td>
</tr>
<tr>
<td>Operating System:</td>
<td>Red Hat Enterprise Linux AS 3</td>
</tr>
<tr>
<td>File System:</td>
<td>ext2</td>
</tr>
<tr>
<td>Other Software:</td>
<td>None</td>
</tr>
</tbody>
</table>

### HTTP Software

**Vendor:** Red Hat  
**HTTP Software:** Red Hat Content Accelerator 3.2  
**API:** RHCA API  
**Server Cache:** None  
**Log Mode:** Binary CLF

### Notes/Tuning Information

**SUT Notes**  
1 U320 15K 36GB disk for OS, 4 U320 15K 36G disks (RAID0 stripe) for web pages.  
ACPI SRAT support disabled

**Operating System Notes**

ulimit -n 10000, sets number of open files, default 1024  
Two NIC ports’ IRQs bound per CPU; timer IRQ bound to CPU 0; LSI(web pages) IRQ bound to CPU1, default 0  
Each NIC’s TX queue length set to 20000 via ifconfig, default 100  
File systems mounted with "noatime,nodiratime", no inode access time updating  
net.ipv4.nonlocal_bind = 1, allows processes to bind to non-local IP adresses  
net.ipv4.tcp_timestamps = 0, turns TCP timestamp support off, default on  
net.ipv4.tcp_window_scaling = 0, turn TCP window scaling support off, default on  
net.core.hot_list_length = 5000, maximum number of skb-heads to be cached, default 128  
net.core.rmem_max = 10000000, maximum receive socket buffer size, default 131071  
net.core.wmem_max = 10000000, maximum send socket buffer size, default 131071  
net.core.rmem_default = 10000000, default receive socket buffer size, default 65535  
net.core.wmem_default = 10000000, default send socket buffer size, default 65535  
net.core.optmem_max = 10000000, maximum amount of option memory buffers, default 10240  
net.core.netdev_max_backlog = 300000, number of unprocessed input packets before kernel starts dropping them, default 300  
sys.vm.dcache_priority = 1000000, lowers # entries zapped from dcache each iteration, default 0  
Kernel Parameters: idle=poll, idle threads pool reschedule flag, default is to use HLT instruction
HTTP Software Notes
  Two networks bound per tux thread
  net.tux.logging = 1, turns on logging of requests, default 0
  net.tux.cgiroot = /, cgi root check, default /var/www/tux/cgiroot/
  net.tux.cgi_uid = 99, uid 'nobody' for cgi scripts, default -1
  net.tux.cgi_gid = 99, gid 'nobody' for cgi scripts, default -1
  net.tux.noid = 1, suppress the Server id string, default 0
  net.tux.generate_etags = 0, do not generate ETag header, default 1
  net.tux.generate_last_mod = 0, do not generate Last-Modified header, default 0
  net.tux.max_connect = 50000, maximum # of simultaneous connections, default 1000

Client Notes
  Clients require a Tyan Tiger motherboard and an ATX case.
  Case uses a 300W ATX power supply and a 40GB ATA 133 IDE hard drive.

Other Notes
  Tuning Disclosure: See above.
  Dynamic API: Dell-20031027-RHCA.tgz
  Kernel config: AMD-20040501-config.tux