Hewlett-Packard Company

ProLiant DL360e Gen8
(2.20 GHz, Intel Xeon E5-2407)

CPU2006 license: 3
Test date: Sep-2013
Test sponsor: Hewlett-Packard Company
Hardware Availability: Jun-2012
Tested by: Hewlett-Packard Company
Software Availability: Sep-2013

SPECint®2006 = Not Run
SPECint_base2006 = 29.5

SPECint_base2006 = 29.5

CPU Name: Intel Xeon E5-2407
CPU Characteristics:
CPU MHz: 2200
FPU: Integrated
CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
CPU(s) orderable: 1 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB L1+D on chip per core
L3 Cache: 10 MB L1+D on chip per chip
Other Cache: None
Memory: 8 GB (2 x 4 GB 1Rx4 PC3-12800R-11, ECC, running at 1066 MHz and CL7)
Disk Subsystem: 2 x 200 GB SAS, RAID 0
Other Hardware: None

Software
Operating System: Red Hat Enterprise Linux Server release 6.4, (Santiago) 2.6.32-358.el6.x86_64
Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux;
Auto Parallel: Yes
File System: ext4
System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: Not Applicable
Other Software: Microquill SmartHeap V10.0
Hewlett-Packard Company

ProLiant DL360e Gen8
(2.20 GHz, Intel Xeon E5-2407)

SPECint2006 = Not Run
SPECint_base2006 = 29.5

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>487</td>
<td>20.0</td>
<td>488</td>
<td>20.0</td>
<td>487</td>
<td>20.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>401.bzip2</td>
<td>649</td>
<td>14.9</td>
<td>650</td>
<td>14.9</td>
<td>652</td>
<td>14.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>403.gcc</td>
<td>381</td>
<td>21.1</td>
<td>382</td>
<td>21.1</td>
<td>382</td>
<td>21.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>429.mcf</td>
<td>208</td>
<td>43.8</td>
<td>204</td>
<td>44.7</td>
<td>205</td>
<td>44.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>445.gobmk</td>
<td>626</td>
<td>16.8</td>
<td>626</td>
<td>16.7</td>
<td>627</td>
<td>16.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>456.hmmer</td>
<td>275</td>
<td>33.9</td>
<td>273</td>
<td>34.2</td>
<td>272</td>
<td>34.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>458.sjeng</td>
<td>656</td>
<td>18.4</td>
<td>655</td>
<td>18.5</td>
<td>656</td>
<td>18.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>462.libquantum</td>
<td>60.1</td>
<td>345</td>
<td>60.1</td>
<td>345</td>
<td>60.1</td>
<td>345</td>
<td></td>
<td></td>
</tr>
<tr>
<td>464.h264ref</td>
<td>679</td>
<td>32.6</td>
<td>675</td>
<td>32.8</td>
<td>676</td>
<td>32.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>334</td>
<td>18.7</td>
<td>335</td>
<td>18.7</td>
<td>336</td>
<td>18.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>473.astar</td>
<td>358</td>
<td>19.6</td>
<td>362</td>
<td>19.4</td>
<td>361</td>
<td>19.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>191</td>
<td>36.1</td>
<td>191</td>
<td>36.0</td>
<td>197</td>
<td>35.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
Filesystem page cache cleared with:
echo 1 > /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
umactl --interleave=all runspec <etc>

Platform Notes

BIOS Configuration:
HP Power Profile set to Maximum Performance
Memory Power Savings Mode set to Maximum Performance
Collaborative Power Control set to Disabled
Dynamic Power Capping Functionality set to Disabled
Thermal Configuration set to Maximum Cooling
Processor Power and Utilization Monitoring set to Disabled
Minimum Processor Idle Power Core State set to C6 State
Minimum Processor Idle Power Packages State set to Package C6 (non-retention) State

Sysinfo program /cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on DL360e-g8-sr Tue Sep 10 10:21:39 2013

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:
Hewlett-Packard Company
ProLiant DL360e Gen8
(2.20 GHz, Intel Xeon E5-2407)

SPECint2006 = Not Run
SPECint_base2006 = 29.5

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: Sep-2013
Hardware Availability: Jun-2012
Software Availability: Sep-2013

Platform Notes (Continued)

http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo
  model name : Intel(R) Xeon(R) CPU E5-2407 0 @ 2.20GHz
  1 "physical id"s (chips)
  4 "processors"
  cores, siblings (Caution: counting these is hw and system dependent. The
  following excerpts from /proc/cpuinfo might not be reliable. Use with
  caution.)
  cpu cores : 4
  siblings : 4
  physical 0: cores 0 1 2 3
  cache size : 10240 KB

From /proc/meminfo
  MemTotal: 8151312 kB
  HugePages_Total: 0
  Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
  Red Hat Enterprise Linux Server release 6.4 (Santiago)

From /etc/*release* /etc/*version*
  redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
  system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)

uname -a:
  Linux DL360e-g8-sr 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013
  x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Sep 10 10:12

SPEC is set to: /cpu2006
  Filesystem Type Size Used Avail Use% Mounted on
  /dev/sda3 ext4 365G 12G 335G 4% /

Additional information from dmidecode:
  BIOS HP P73 07/01/2013
  Memory:
    10x UNKNOWN NOT AVAILABLE
    2x UNKNOWN NOT AVAILABLE 4 GB 1067 MHz 1 rank
(End of data from sysinfo program)

Regarding the sysinfo display about the memory installed, the correct amount of
memory is 8 GB and the dmidecode description should read as the following:
  2x UNKNOWN NOT AVAILABLE 4 GB 1067 MHz 1 rank
Hewlett-Packard Company
ProLiant DL360e Gen8
(2.20 GHz, Intel Xeon E5-2407)

SPECint2006 = Not Run
SPECint_base2006 = 29.5

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: Sep-2013
Hardware Availability: Jun-2012
Software Availability: Sep-2013

General Notes
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/cpu2006/libs/32:/cpu2006/libs/64:/cpu2006/sh"
OMP_NUM_THREADS = "2"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.4

Base Compiler Invocation
C benchmarks:
   icc -m64

C++ benchmarks:
   icpc -m64

Base Portability Flags
C benchmarks:
   -DSPEC_CPU_LP64
   -DSPEC_CPU_LINUX_X64

C++ benchmarks:
   -DSPEC_CPU_LP64
   -DSPEC_CPU_LINUX

Base Optimization Flags
C benchmarks:
   -xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:
   -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
   -Wl,-z,muldefs -L/sh -lsmartheap64

Base Other Flags
C benchmarks:

Continued on next page
**Hewlett-Packard Company**

ProLiant DL360e Gen8  
(2.20 GHz, Intel Xeon E5-2407)

<table>
<thead>
<tr>
<th>SPECint2006 =</th>
<th>Not Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_base2006 =</td>
<td>29.5</td>
</tr>
</tbody>
</table>

CPU2006 license: 3  
Test sponsor: Hewlett-Packard Company  
Tested by: Hewlett-Packard Company

**Base Other Flags (Continued)**

- 403.gcc: -Dalloca=_alloca

The flags files that were used to format this result can be browsed at

- [http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-revB.20131009.html](http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-revB.20131009.html)

You can also download the XML flags sources by saving the following links:

- [http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-revB.20131009.xml](http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-revB.20131009.xml)

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.  
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.  
Report generated on Thu Jul 24 17:00:21 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 9 October 2013.