## Hewlett-Packard Company

### SPECint®2006 = Not Run

**SPECint_base2006 = 34.0**

<table>
<thead>
<tr>
<th>Test sponsor:</th>
<th>Hewlett-Packard Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested by:</td>
<td>Hewlett-Packard Company</td>
</tr>
<tr>
<td>CPU2006 license:</td>
<td>3</td>
</tr>
</tbody>
</table>

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

### Hardware

- **CPU Name:** Intel Xeon E5-2420
- **CPU Characteristics:** Intel Turbo Boost Technology up to 2.40 GHz
- **CPU MHZ:** 1900
- **FPU:** Integrated
- **CPU(s) enabled:** 6 cores, 1 chip, 6 cores/chip, 2 threads/core
- **CPU(s) orderable:** 1.2 chips
- **Primary Cache:** 32 KB I + 32 KB D on chip per core
- **Secondary Cache:** 256 KB I+D on chip per core
- **L3 Cache:** 15 MB I+D on chip per chip
- **Other Cache:** None
- **Memory:** 16 GB (4 x 4 GB 1Rx4 PC3-12800R-11, ECC, running at 1333 MHz and CL9)
- **Disk Subsystem:** 2 x 300 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

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<table>
<thead>
<tr>
<th>Benchmark</th>
<th>SPECint2006</th>
<th>SPECint_base2006</th>
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<tr>
<td>400.perlbench</td>
<td>21.8</td>
<td>0</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>15.9</td>
<td>0</td>
</tr>
<tr>
<td>403.gcc</td>
<td>23.0</td>
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</tr>
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<td>471.omnetpp</td>
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<td>0</td>
</tr>
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**SPECint_base2006 = 34.0**
Hewlett-Packard Company

ProLiant DL380e Gen8
(1.90 GHz, Intel Xeon E5-2420)

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

SPECint2006 = Not Run
SPECint_base2006 = 34.0

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base Seconds</th>
<th>Ratio</th>
<th>Peak Seconds</th>
<th>Ratio</th>
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<td>401.bzip2</td>
<td>605</td>
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<td>607</td>
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<td>403.gcc</td>
<td>349</td>
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<td>350</td>
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<tr>
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<td>191</td>
<td>47.8</td>
<td>191</td>
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</tr>
<tr>
<td>445.gobmk</td>
<td>616</td>
<td>17.0</td>
<td>616</td>
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</tr>
<tr>
<td>456.hmmer</td>
<td>251</td>
<td>37.2</td>
<td>251</td>
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<tr>
<td>458.sjeng</td>
<td>601</td>
<td>20.1</td>
<td>601</td>
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</tr>
<tr>
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<td>820</td>
<td>25.1</td>
<td>827</td>
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<td>483.xalancbmk</td>
<td>172</td>
<td>40.2</td>
<td>171</td>
<td>40.4</td>
</tr>
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</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.:
numactl --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 Dl380e-g8-sr Tue Sep 10 10:23:28 2013

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:
Continued on next page
Hewlett-Packard Company

ProLiant DL380e Gen8
(1.90 GHz, Intel Xeon E5-2420)

SPECint2006 = Not Run
SPECint_base2006 = 34.0

CPU2006 license: 3
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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 E5-2420 0 @ 1.90GHz
  1 "physical id"s (chips)
  12 "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 : 6
  siblings : 12
  physical 0: cores 0 1 2 3 4 5
  cache size : 15360 KB

From /proc/meminfo
  MemTotal: 16294148 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 Dl380e-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 10:20

SPEC is set to: /cpu2006
  Filesystem Type Size Used Avail Use% Mounted on
  /dev/sda3 ext4 548G 12G 509G 3% /

Additional information from dmidecode:
  BIOS HP P73 07/01/2013
  Memory:
  2x HP 647648-071 4 GB 1333 MHz 1 rank
  8x UNKNOWN NOT AVAILABLE
  2x UNKNOWN NOT AVAILABLE 4 GB 1333 MHz 1 rank

(End of data from sysinfo program)

Regarding the sysinfo display about the memory installed, the correct amount of
memory is 16 GB and the dmidecode description should read as the following:
  2x HP 647648-071 4 GB 1333 MHz 1 rank
  2x UNKNOWN NOT AVAILABLE 4 GB 1333 MHz 1 rank
Hewlett-Packard Company

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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 = "6"
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
  400.perlbench: -DSPEC_CPU_LP64
  401.bzip2: -DSPEC_CPU_LP64
  403.gcc: -DSPEC_CPU_LP64
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  445.gobmk: -DSPEC_CPU_LP64
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  462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
  464.h264ref: -DSPEC_CPU_LP64
  471.omnetpp: -DSPEC_CPU_LP64
  473.astar: -DSPEC_CPU_LP64
  483.xalancbmk: -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
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**Base Other Flags (Continued)**

403.gcc: -Dalloca=__alloca

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

- [Intel-ic14.0-official-linux64.20140128.html](http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.html)
- [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:

- [Intel-ic14.0-official-linux64.20140128.xml](http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml)
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For questions about this result, please contact the tester.  
For other inquiries, please contact webmaster@spec.org.

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