## SPEC® CINT2006 Result

### Hewlett-Packard Company
ProLiant DL380p Gen8  
(2.50 GHz, Intel Xeon E5-2609 v2)

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_rate2006</td>
<td>250</td>
</tr>
<tr>
<td>SPECint_rate_base2006</td>
<td>241</td>
</tr>
</tbody>
</table>

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

### Hardware
- **CPU Name:** Intel Xeon E5-2609 v2
- **CPU Characteristics:**
  - CPU MHz: 2500
  - FPU: Integrated
  - CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
  - Primary Cache: 32 KB I + 32 KB D on chip per core
  - Secondary Cache: 256 KB I+D on chip per core
  - L3 Cache: 10 MB I+D on chip per chip
  - Other Cache: None
  - Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC, running at 1333 MHz and CL9)
  - Disk Subsystem: 1 x 146 GB 15 K SAS, RAID 0
  - Other Hardware: None

### Software
- **Operating System:** Red Hat Enterprise Linux Server release 6.4 (Santiago)  
  - Kernel 2.6.32-358.el6.x86_64
- **Compiler:** C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
- **Auto Parallel:** No
- **File System:** ext4
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 32-bit
- **Peak Pointers:** 32/64-bit
- **Other Software:** Microquill SmartHeap V10.0

---

Standard Performance Evaluation Corporation  
info@spec.org  
http://www.spec.org/
**SPEC CINT2006 Result**

**Hewlett-Packard Company**

ProLiant DL380p Gen8
(2.50 GHz, Intel Xeon E5-2609 v2)

**SPECint_rate2006 = 250**

**SPECint_rate_base2006 = 241**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</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>8</td>
<td>450</td>
<td>173</td>
<td>450</td>
<td>174</td>
<td>450</td>
<td>174</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>8</td>
<td>635</td>
<td>121</td>
<td>638</td>
<td>121</td>
<td>637</td>
<td>121</td>
</tr>
<tr>
<td>403.gcc</td>
<td>8</td>
<td>333</td>
<td>193</td>
<td>332</td>
<td>194</td>
<td>333</td>
<td>193</td>
</tr>
<tr>
<td>429.mcf</td>
<td>8</td>
<td>182</td>
<td>402</td>
<td>182</td>
<td>402</td>
<td>182</td>
<td>402</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>8</td>
<td>555</td>
<td>151</td>
<td>555</td>
<td>151</td>
<td>554</td>
<td>151</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>8</td>
<td>235</td>
<td>318</td>
<td>235</td>
<td>318</td>
<td>235</td>
<td>318</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>8</td>
<td>585</td>
<td>165</td>
<td>586</td>
<td>166</td>
<td>586</td>
<td>166</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>8</td>
<td>101</td>
<td>1630</td>
<td>101</td>
<td>1640</td>
<td>101</td>
<td>1640</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>8</td>
<td>544</td>
<td>325</td>
<td>544</td>
<td>325</td>
<td>531</td>
<td>333</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>8</td>
<td>362</td>
<td>138</td>
<td>365</td>
<td>137</td>
<td>362</td>
<td>138</td>
</tr>
<tr>
<td>473.astar</td>
<td>8</td>
<td>401</td>
<td>140</td>
<td>400</td>
<td>141</td>
<td>400</td>
<td>140</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>8</td>
<td>191</td>
<td>289</td>
<td>190</td>
<td>290</td>
<td>190</td>
<td>290</td>
</tr>
</tbody>
</table>

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

**Submit Notes**

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

**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
```
runcmd invoke through numactl i.e.:
```
numactl --interleave=all runspec <etc>
```
Used "stop-services" script before the run

**Platform Notes**

BIOS Configuration:
- HP Power Profile set to Maximum Performance
- Energy/Performance Bias is set to Maximum Performance
- Memory Power Savings Mode set to Maximum Performance
- Thermal Configuration set to Maximum Cooling
- Collaborative Power Control set to Disabled
- Dynamic Power Capping Functionality set to Disabled
- Processor Power and Utilization Monitoring set to Disabled
- Memory Refresh Rate set to 1x
Hewlett-Packard Company

ProLiant DL380p Gen8
(2.50 GHz, Intel Xeon E5-2609 v2)

SPECint_rate2006 = 250
SPECint_rate_base2006 = 241

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

Test date: Oct-2013
Hardware Availability: Sep-2013
Software Availability: Sep-2013

Platform Notes (Continued)

Sysinfo program /cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on DL380p-Gen8-0S9 Thu Oct 17 10:53:27 2013

This section contains SUT (System Under Test) info as seen by
some common utilities. To remove or add to this section, see:
http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E5-2609 v2 @ 2.50GHz
  2 "physical id"s (chips)
  8 "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
  physical 1: cores 0 1 2 3
  cache size : 10240 KB

From /proc/meminfo
MemTotal:       132119284 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 DL380p-Gen8-0S9 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 Oct 17 10:40

SPEC is set to: /cpu2006

Filesystem    Type    Size  Used Avail Use% Mounted on
/dev/sda3     ext4    273G  19G  241G  8% /

Additional information from dmidecode:
BIOS HP P70 09/08/2013
Memory:
  16x HP 689911-071 8 GB 1333 MHz 2 rank
  8x UNKNOWN NOT AVAILABLE

(End of data from sysinfo program)
Regarding the sysinfo display about the memory installed, the correct amount of
Hewlett-Packard Company
ProLiant DL380p Gen8
(2.50 GHz, Intel Xeon E5-2609 v2)

SPECint_rate2006 = 250
SPECint_rate_base2006 = 241

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

Test date: Oct-2013
Hardware Availability: Sep-2013
Software Availability: Sep-2013

Platform Notes (Continued)
memory is 128 GB and the dmidecode description should read as the following:
16x HP 689911-071 8 GB 1333 MHz 2 rank

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

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

Base Compiler Invocation

C benchmarks:
  icc -m32

C++ benchmarks:
  icpc -m32

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
  -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:
  -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
    -Wl,-z,muldefs -L/sh -lsmartheap

Base Other Flags

C benchmarks:
  403.gcc: -Dalloca=_alloca
SPEC CINT2006 Result

Hewlett-Packard Company
ProLiant DL380p Gen8 (2.50 GHz, Intel Xeon E5-2609 v2)

SPECint_rate2006 = 250
SPECint_rate_base2006 = 241

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

Peak Compiler Invocation

C benchmarks (except as noted below):
    icc  -m32
        400.perlbench: icc  -m64
        401.bzip2: icc  -m64
        456.hmmer: icc  -m64
        458.sjeng: icc  -m64

C++ benchmarks:
    icpc  -m32

Peak Portability Flags

    400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
    401.bzip2: -DSPEC_CPU_LP64
    456.hmmer: -DSPEC_CPU_LP64
    458.sjeng: -DSPEC_CPU_LP64
    462.libquantum: -DSPEC_CPU_LINUX
    483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:
    400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
                    -o3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
                    -auto-ilp32
    401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
                -o3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
                -opt-prefetch -auto-ilp32 -ansi-alias
    403.gcc: basepeak = yes
    429.mcf: basepeak = yes
    445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
                -ansi-alias -opt-mem-layout-trans=3
    456.hmmer: -xSSE4.2 -ipo -o3 -no-prec-div -unroll2 -auto-ilp32
    458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
               -o3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
               -unroll4 -auto-ilp32

Continued on next page
Hewlett-Packard Company

ProLiant DL380p Gen8
(2.50 GHz, Intel Xeon E5-2609 v2)

SPECint_rate2006 = 250
SPECint_rate_base2006 = 241

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

Test date: Oct-2013
Hardware Availability: Sep-2013
Software Availability: Sep-2013

Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes
464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
            -o3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
            -unroll2 -ansi-alias

C++ benchmarks:
471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
            -o3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
            -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
            -L/sh -lsmartheap

473.astar: basepeak = yes
483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.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/Intel-ic14.0-official-linux64.20140128.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.
Originally published on 5 November 2013.