Hewlett-Packard Company

ProLiant DL360p Gen8
(3.30 GHz, Intel Xeon E5-2667 v2)

SPECint®2006 = 67.9
SPECint_base2006 = 62.7

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company
Test date: Feb-2014
Hardware Availability: Sep-2013

CPU Name: Intel Xeon E5-2667 v2
CPU Characteristics: Intel Turbo Boost Technology up to 4.00 GHz
CPU MHz: 3300
FPU: Integrated
CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip
CPU(s) orderable: 1.2 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: 25 MB I+D on chip per chip
Other Cache: None
Memory: 128 GB (16 x 8 GB 2Rx4 PC3-14900R-13, ECC)
Disk Subsystem: 1 x 400 GB SAS SSD, RAID 0
Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64) SP3
Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
Auto Parallel: Yes
File System: ext3
System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V10.0
Hewlett-Packard Company

ProLiant DL360p Gen8
(3.30 GHz, Intel Xeon E5-2667 v2)

SPECint2006 = 67.9
SPECint_base2006 = 62.7

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

Test date: Feb-2014
Hardware Availability: Sep-2013
Software Availability: Sep-2013

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Base</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>264</td>
<td>37.1</td>
<td>264</td>
<td>37.1</td>
<td>264</td>
<td>37.0</td>
<td></td>
</tr>
<tr>
<td>401.bzip2</td>
<td>350</td>
<td>27.5</td>
<td>350</td>
<td>27.5</td>
<td>351</td>
<td>27.5</td>
<td>347</td>
</tr>
<tr>
<td>403.gcc</td>
<td>216</td>
<td>37.2</td>
<td>215</td>
<td>37.5</td>
<td>215</td>
<td>37.4</td>
<td>210</td>
</tr>
<tr>
<td>429.gobmk</td>
<td>369</td>
<td>28.5</td>
<td>369</td>
<td>28.4</td>
<td>369</td>
<td>28.4</td>
<td>332</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>134</td>
<td>69.8</td>
<td>135</td>
<td>69.3</td>
<td>134</td>
<td>69.7</td>
<td>134</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>360</td>
<td>33.6</td>
<td>361</td>
<td>33.6</td>
<td>361</td>
<td>33.6</td>
<td>353</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>6.08</td>
<td>3.51</td>
<td>5.48</td>
<td>3780</td>
<td>5.48</td>
<td>3780</td>
<td>6.08</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>402</td>
<td>55.1</td>
<td>402</td>
<td>55.0</td>
<td>401</td>
<td>55.2</td>
<td>328</td>
</tr>
<tr>
<td>474.onetmpp</td>
<td>174</td>
<td>35.9</td>
<td>167</td>
<td>37.5</td>
<td>167</td>
<td>37.4</td>
<td>116</td>
</tr>
<tr>
<td>473.astar</td>
<td>189</td>
<td>37.2</td>
<td>188</td>
<td>37.2</td>
<td>188</td>
<td>37.3</td>
<td>189</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>105</td>
<td>65.5</td>
<td>102</td>
<td>67.4</td>
<td>105</td>
<td>65.5</td>
<td>104</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
runcmp command page cache cleared with:
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
Disabled unused Linux services through "stop_services.sh" before running.

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
Memory Refresh Rate set to 1x
Intel HyperThreading set to Disabled
Sysinfo program /cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 $$ e86d102572650a6e4d596a3cee98f191
running on dl360p-gen8-sles11 Tue Feb 11 16:29:32 2014

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

Continued on next page
Hewlett-Packard Company

ProLiant DL360p Gen8
(3.30 GHz, Intel Xeon E5-2667 v2)

SPECint2006 = 67.9
SPECint_base2006 = 62.7

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

Platform Notes (Continued)

From /proc/cpuinfo
  - model name : Intel(R) Xeon(R) CPU E5-2667 v2 @ 3.30GHz
  - 2 "physical id"s (chips)
  - 16 "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 : 8
    - siblings : 8
    - physical 0: cores 1 2 3 4 8 9 10 11
    - physical 1: cores 1 2 3 4 8 9 10 11
    - cache size : 25600 KB

From /proc/meminfo
  - MemTotal: 132130192 kB
  - HugePages_Total: 0
  - Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
  - SUSE Linux Enterprise Server 11 (x86_64)

From /etc/*release* /etc/*version*
  - SuSE-release:
    - SUSE Linux Enterprise Server 11 (x86_64)
    - VERSION = 11
    - PATCHLEVEL = 3

uname -a:
  - Linux dl360p-gen8-sles11 3.0.76-0.11-default #1 SMP Fri Jun 14 08:21:43 UTC 2013 (ccab990) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Feb 11 16:25 last=S

SPEC is set to: /cpu2006
  - Filesystem Type Size Used Avail Use% Mounted on
    - /dev/sda3 ext3 365G 9.0G 338G 3% /

Additional information from dmidecode:
  - BIOS HP P71 09/08/2013
  - Memory:
    - 16x HP 712382-071 8 GB 1866 MHz
    - 8x UNKNOWN NOT AVAILABLE

(End of data from sysinfo program)
Regarding the sysinfo display about the memory installed, the correct amount of memory is 128 GB and the dmidecode description should have one line reading as:
  - 16x HP 712382-071 8 GB 1866 MHz
Hewlett-Packard Company
ProLiant DL360p Gen8
(3.30 GHz, Intel Xeon E5-2667 v2)

SPECint2006 = 67.9
SPECint_base2006 = 62.7

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

General Notes
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
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  -m64

C++ benchmarks:
   icpc  -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
   401.bzip2: -DSPEC_CPU_LP64
   403.gcc: -DSPEC_CPU_LP64
   429.mcf: -DSPEC_CPU_LP64
   445.gobmk: -DSPEC_CPU_LP64
   456.hmmer: -DSPEC_CPU_LP64
   458.sjeng: -DSPEC_CPU_LP64
   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

Continued on next page
SPEC CINT2006 Result

Hewlett-Packard Company
ProLiant DL360p Gen8
(3.30 GHz, Intel Xeon E5-2667 v2)

SPECint2006 = 67.9
SPECint_base2006 = 62.7

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

Base Other Flags (Continued)

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc  -m64

400.perlbench: icc  -m32
445.gobmk: icc  -m32
464.h264ref: icc  -m32

C++ benchmarks (except as noted below):
icpc  -m32

473.astar: icpc  -m64

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
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) -opt-prefetch -ansi-alias

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32 -opt-prefetch -ansi-alias

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -inline-calloc -opt-malloc-options=3 -auto-ilp32

Continued on next page
Hewlett-Packard Company

ProLiant DL360p Gen8
(3.30 GHz, Intel Xeon E5-2667 v2)

SPECint2006 = 67.9
SPECint_base2006 = 62.7

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

Peak Optimization Flags (Continued)

429.mcf: basepeak = yes
445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
            -ansi-alias
456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
            -ansi-alias
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
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)
            -opt-ra-region-strategy=block
            -ansi-alias
            -Wl,-z,muldefs -L/sh -lsmartheap
473.astar: basepeak = yes
483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
            -Wl,-z,muldefs -L/sh -lsmartheap

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-revD.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-revD.xml
Hewlett-Packard Company

ProLiant DL360p Gen8
(3.30 GHz, Intel Xeon E5-2667 v2)

SPECint2006 = 67.9
SPECint_base2006 = 62.7

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

Test date: Feb-2014
Hardware Availability: Sep-2013
Software Availability: Sep-2013

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 2 April 2014.