Hewlett-Packard Company

ProLiant DL380p Gen8
(3.30 GHz, Intel Xeon E5-2667 v2)

**SPECint®2006** = 67.9
**SPECint_base2006** = 62.8

**Hardware**

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 300 GB 10 K SAS, RAID 0
Other Hardware: None

**Software**

Operating System: SUSE Linux Enterprise Server 11 (x86_64) SP3
Kernel 3.0.76-0.11-default
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

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http://www.spec.org/
# SPEC CINT2006 Result

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

## Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
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<td>37.0</td>
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<td>483.xalancbmk</td>
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<td>65.4</td>
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<td>66.9</td>
<td>103</td>
<td>67.0</td>
<td>105</td>
<td>65.4</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"  
Reclaim mode enabled with:  
echo 1 > /proc/sys/vm/zone_reclaim_mode  
Transparent Huge Pages enabled with:  
echo always > /sys/kernel/mm/transparent_hugepage/enabled  
Filesystem page cache cleared with:  
echo 1 > /proc/sys/vm/drop_caches  
runcspec command invoked through numactl i.e.:  
umactl --localalloc runspec <etc>

## Platform Notes

BIOS Configuration:  
Intel Hyperthreading Options set to Disabled  
HP Power Profile set to Maximum Performance  
Minimum Processor Idle Power Core State set to C1E state  
Minimum Processor Idle Power Package State set to Package C6 (retention) State  
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

Sysinfo program /cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191

Continued on next page
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SPECint_base2006 = 62.8

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
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Platform Notes (Continued)

running on dl380p-gen8-0sb Fri Feb 7 01:39:49 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

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 dl380p-gen8-0sb 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 6 14:39 last=S

SPEC is set to: /cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 ext3 274G 13G 260G 5% /

Additional information from dmidecode:
BIOS HP P70 12/20/2013
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:

Continued on next page
## SPEC CINT2006 Result

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Test sponsor: Hewlett-Packard Company  
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### Platform Notes (Continued)

16x HP 712382-071 8 GB 1866 MHz  
Regarding the sysinfo display about the CPU cores from /proc/cpuinfo, the correct mapping should display as cores 0 through 7. The mapping should read as the following:  
- physical 0: cores 0 1 2 3 4 5 6 7  
- physical 1: cores 0 1 2 3 4 5 6 7

### 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"  
- OMP_NUM_THREADS = "16"

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:  
lcpc -m64

### Base Portability Flags

- 400.perlbmk: -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

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Base Optimization Flags (Continued)

    C++ benchmarks:
    -xsSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
    -Wl,-z,muldefs -L/sh -lsmartheap64

Base Other Flags

    C benchmarks:
    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  -m64
    471.omnetpp: icpc  -m32

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_LP64 -DSPEC_CPU_LINUX

Peak Optimization Flags

    C benchmarks:

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Peak Optimization Flags (Continued)

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

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
-wl,-z,muldefs -L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca
<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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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.html
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.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.xml
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml

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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.
Originally published on 11 March 2014.