Hewlett-Packard Company
ProLiant DL380p Gen8
(2.20 GHz, Intel Xeon E5-2660 v2)

**SPECint** <sup>rate</sup> <sub>2006</sub> = 745
**SPECint_rate_base2006** = 720

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<td>Sep-2013</td>
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<td>Software Availability:</td>
<td>Sep-2013</td>
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### Hardware

- **CPU Name:** Intel Xeon E5-2660 v2
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.00 GHz
- **CPU MHz:** 2200
- **FPU:** Integrated
- **CPU(s) enabled:** 20 cores, 2 chips, 10 cores/chip, 2 threads/core
- **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:** 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
## Results Table

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</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
runspec command invoked 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
Sysinfo program /cpu2006/config/sysinfo.rev6818

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Hewlett-Packard Company
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SPECint_rate_base2006 = 720

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

Platform Notes (Continued)

$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d1052572650a6e4d596a3cee98f191
running on DL380p-Gen8-0YD Mon Oct 14 16:34:54 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 E5-2660 v2 @ 2.20GHz
  2 "physical id"s (chips)
  40 "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 : 10
  siblings  : 20
  physical 0: cores 0 1 2 3 4 8 9 10 11 12
  physical 1: cores 0 1 2 3 4 8 9 10 11 12
  cache size : 25600 KB

From /proc/meminfo
  MemTotal:       132128496 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-Gen8-0YD 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 14 13:19

SPEC is set to: /cpu2006
  Filesystem    Type    Size  Used Avail Use% Mounted on
  /dev/sda3     ext4    273G  34G  226G  14% /

Additional information from dmidecode:
  BIOS HP P70 09/08/2013
  Memory:
    16x HP 712382-071 8 GB 1866 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
memory is 128 GB and the dmidecode description should read as the following:
Continued on next page
Hewlett-Packard Company

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Test sponsor: Hewlett-Packard Company
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Test date: Oct-2013
Hardware Availability: Sep-2013
Software Availability: Sep-2013

Platform Notes (Continued)

16x HP 712382-071 8 GB 1866 MHz 2 rank
Regarding the sysinfo display about the CPU cores from /proc/cpuinfo, the correct
mapping should display as cores 0 through 9. The mapping should read as the
following:
  physical 0: cores 0 1 2 3 4 5 6 7 8 9
  physical 1: cores 0 1 2 3 4 5 6 7 8 9

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

Continued on next page
Hewlett-Packard Company

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

Base Other Flags (Continued)

403.gcc: -Dalloca=_alloca

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

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Hewlett-Packard Company
ProLiant DL380p Gen8
(2.20 GHz, Intel Xeon E5-2660 v2)

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SPEC CINT2006 Result

SPECint_rate2006 = 745
SPECint_rate_base2006 = 720

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)

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

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 -lsmarthheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

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 CINT2006 Result

**Hewlett-Packard Company**

ProLiant DL380p Gen8  
(2.20 GHz, Intel Xeon E5-2660 v2)

![SPEC CINT2006 Result](image)

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**CPU2006 license:** 3

**Test date:** Oct-2013

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**Tested by:** Hewlett-Packard Company

**Software Availability:** Sep-2013

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Tested with SPEC CPU2006 v1.2.


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