



# SPEC® CINT2006 Result

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## Hewlett-Packard Company

**SPECint®2006 = 19.3**

ProLiant DL380 G5  
(2.33 GHz, Intel Xeon processor 5140)

**SPECint\_base2006 = 16.4**

CPU2006 license: 3

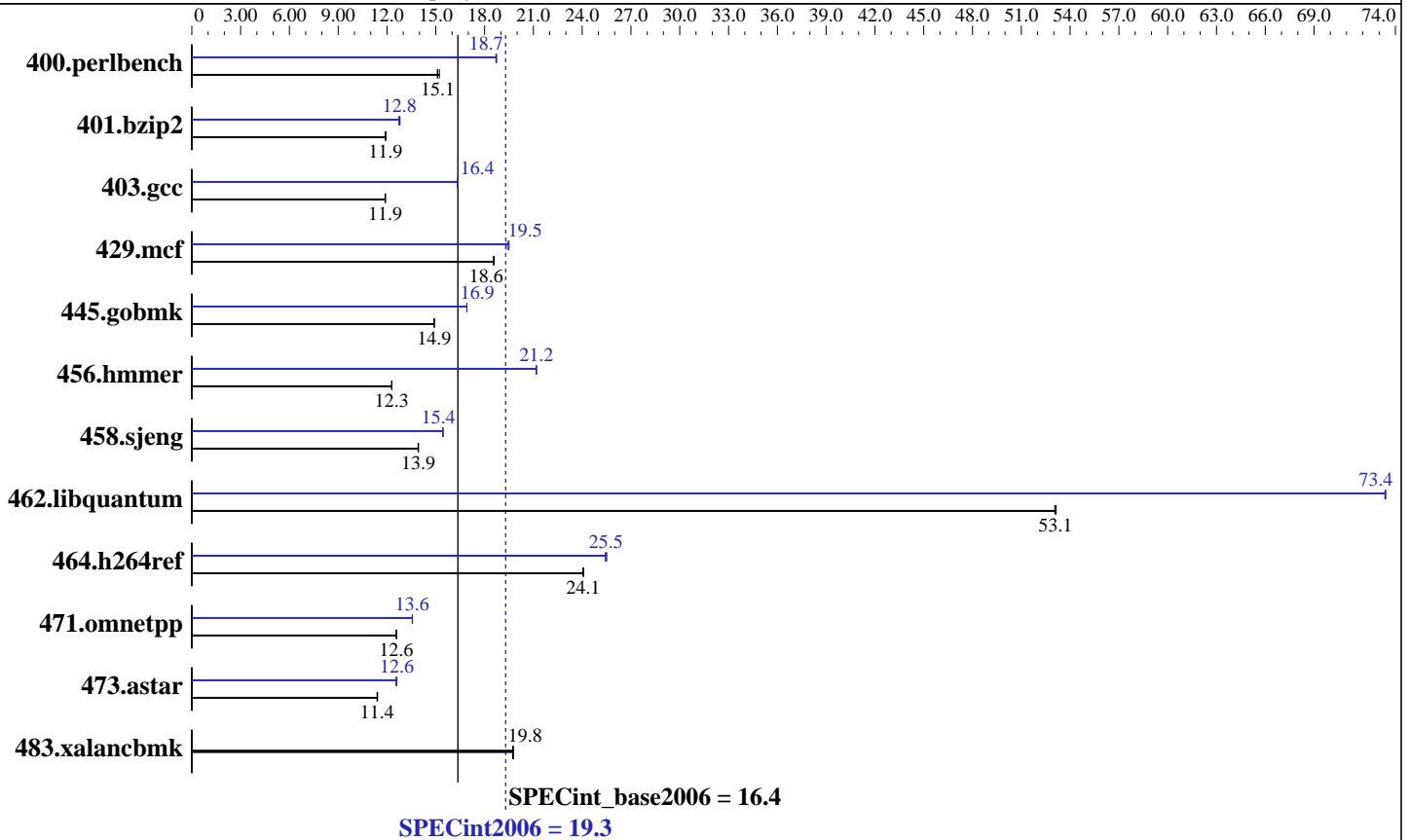
Test date: Sep-2007

Test sponsor: Hewlett-Packard Company

Hardware Availability: Jun-2006

Tested by: Hewlett-Packard Company

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon 5140  
 CPU Characteristics: 2.33 GHz, 2x4 MB L2 shared, 1333 MHz system bus  
 CPU MHz: 2333  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1 or 2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 4 MB I+D on chip per chip  
 L3 Cache: None  
 Other Cache: None  
 Memory: 8 GB (8x1 GB PC2-5300F CL5)  
 Disk Subsystem: 1x72 GB 10 K SAS  
 Other Hardware: None

### Software

Operating System: SuSE Linux Enterprise Server 10 (x86\_64) SP1  
 kernel 2.6.16.46-0.12-smp  
 Compiler: Intel C++ Compiler for Linux32 and Linux64  
 version 10.1  
 Build 20070824  
 Auto Parallel: Yes  
 File System: ext2  
 System State: Multi-user run level 3  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: MicroQuill SmartHeap Library 8.1  
 binutils-2.17.50



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	647	15.1	642	15.2	<b><u>646</u></b>	<b><u>15.1</u></b>	521	18.7	<b><u>522</u></b>	<b><u>18.7</u></b>	523	18.7
401.bzip2	811	11.9	808	11.9	<b><u>810</u></b>	<b><u>11.9</u></b>	758	12.7	754	12.8	<b><u>755</u></b>	<b><u>12.8</u></b>
403.gcc	678	11.9	<b><u>677</u></b>	<b><u>11.9</u></b>	676	11.9	493	16.3	492	16.4	<b><u>492</u></b>	<b><u>16.4</u></b>
429.mcf	491	18.6	<b><u>491</u></b>	<b><u>18.6</u></b>	492	18.6	470	19.4	<b><u>468</u></b>	<b><u>19.5</u></b>	468	19.5
445.gobmk	704	14.9	<b><u>704</u></b>	<b><u>14.9</u></b>	704	14.9	620	16.9	<b><u>620</u></b>	<b><u>16.9</u></b>	620	16.9
456.hammer	760	12.3	<b><u>759</u></b>	<b><u>12.3</u></b>	758	12.3	<b><u>440</u></b>	<b><u>21.2</u></b>	441	21.2	440	21.2
458.sjeng	870	13.9	868	13.9	<b><u>869</u></b>	<b><u>13.9</u></b>	784	15.4	<b><u>783</u></b>	<b><u>15.4</u></b>	783	15.4
462.libquantum	391	53.1	390	53.1	<b><u>390</u></b>	<b><u>53.1</u></b>	<b><u>282</u></b>	<b><u>73.4</u></b>	282	73.4	282	73.4
464.h264ref	920	24.0	<b><u>920</u></b>	<b><u>24.1</u></b>	919	24.1	<b><u>869</u></b>	<b><u>25.5</u></b>	867	25.5	870	25.4
471.omnetpp	497	12.6	<b><u>497</u></b>	<b><u>12.6</u></b>	497	12.6	<b><u>461</u></b>	<b><u>13.6</u></b>	461	13.6	461	13.6
473.astar	614	11.4	616	11.4	<b><u>616</u></b>	<b><u>11.4</u></b>	559	12.6	557	12.6	<b><u>557</u></b>	<b><u>12.6</u></b>
483.xalancbmk	349	19.8	<b><u>349</u></b>	<b><u>19.8</u></b>	350	19.7	349	19.8	<b><u>349</u></b>	<b><u>19.8</u></b>	350	19.7

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

## Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to physical,0
KMP_STACKSIZE set to 64M
```

## Platform Notes

BIOS configuration:  
Power Regulator set to Static High Performance Mode

## Base Compiler Invocation

C benchmarks:  
icc  
  
C++ benchmarks:  
icpc

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX

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## Base Portability Flags (Continued)

483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-fast -vec-guard-write -opt-malloc-options=3 -parallel  
-par-runtime-control

C++ benchmarks:

-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc

401.bzip2: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/bin/icc  
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/lib  
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/include

456.hmmer: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/bin/icc  
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/lib  
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/include

C++ benchmarks:

icpc

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32

401.bzip2: -DSPEC\_CPU\_LP64

456.hmmer: -DSPEC\_CPU\_LP64

462.libquantum: -DSPEC\_CPU\_LINUX

483.xalancbmk: -DSPEC\_CPU\_LINUX



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## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias  
-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch  
-auto-ilp32

403.gcc: -fast -inline-calloc -opt-malloc-options=3

429.mcf: -fast -prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo  
-no-prec-div -ansi-alias

456.hmmcr: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive  
-auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -fast -unroll4 -Ob0 -prefetch  
-opt-streaming-stores always -vec-guard-write  
-opt-malloc-options=3 -parallel -par-runtime-control

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=block  
-Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine  
-Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca



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The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/HP-Intel-ic10.1-linux-flags.20090714.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/HP-Intel-ic10.1-linux-flags.20090714.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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