



# SPEC® CINT2006 Result

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## Hewlett-Packard Company

SPECint®\_rate2006 = 58.5

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

SPECint\_rate\_base2006 = 51.3

CPU2006 license: 3

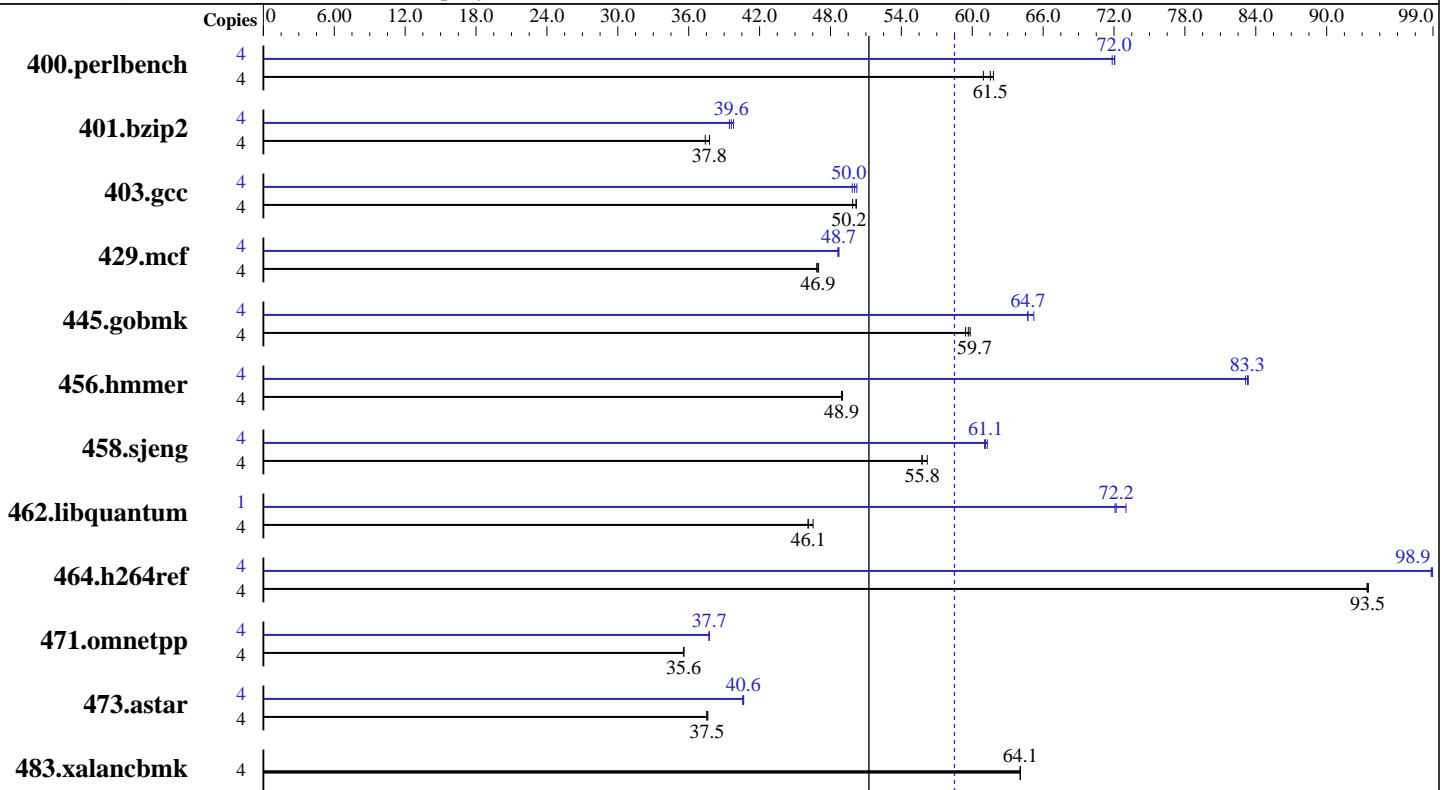
Test date: Sep-2007

Test sponsor: Hewlett-Packard Company

Hardware Availability: Jun-2006

Tested by: Hewlett-Packard Company

Software Availability: Nov-2007



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### 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 20070725  
 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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	632	61.8	<b>635</b>	<b>61.5</b>	641	60.9	4	<b>542</b>	<b>72.0</b>	542	72.1	544	71.8
401.bzip2	4	1022	37.8	1032	37.4	<b>1022</b>	<b>37.8</b>	4	970	39.8	979	39.4	<b>975</b>	<b>39.6</b>
403.gcc	4	646	49.9	642	50.2	<b>642</b>	<b>50.2</b>	4	<b>643</b>	<b>50.0</b>	641	50.2	646	49.8
429.mcf	4	776	47.0	779	46.8	<b>777</b>	<b>46.9</b>	4	749	48.7	750	48.6	<b>749</b>	<b>48.7</b>
445.gobmk	4	706	59.4	701	59.8	<b>703</b>	<b>59.7</b>	4	<b>648</b>	<b>64.7</b>	649	64.7	643	65.2
456.hammer	4	<b>762</b>	<b>48.9</b>	761	49.0	762	48.9	4	448	83.4	<b>448</b>	<b>83.3</b>	449	83.1
458.sjeng	4	861	56.2	868	55.7	<b>868</b>	<b>55.8</b>	4	790	61.3	793	61.0	<b>792</b>	<b>61.1</b>
462.libquantum	4	1798	46.1	<b>1797</b>	<b>46.1</b>	1781	46.5	1	287	72.1	<b>287</b>	<b>72.2</b>	284	73.0
464.h264ref	4	948	93.4	946	93.5	<b>947</b>	<b>93.5</b>	4	<b>895</b>	<b>98.9</b>	894	99.0	896	98.8
471.omnetpp	4	702	35.6	703	35.6	<b>703</b>	<b>35.6</b>	4	662	37.7	663	37.7	<b>663</b>	<b>37.7</b>
473.astar	4	<b>748</b>	<b>37.5</b>	746	37.6	748	37.5	4	<b>691</b>	<b>40.6</b>	692	40.6	691	40.7
483.xalancbmk	4	431	64.1	<b>431</b>	<b>64.1</b>	431	64.1	4	431	64.1	<b>431</b>	<b>64.1</b>	431	64.1

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  
Adjacent Sector Prefetch Disabled

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

## Base Portability Flags

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

Continued on next page



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## Base Portability Flags (Continued)

462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-fast -inline-calloc -opt-malloc-options=3

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/20070725/Linux64/bin/icc  
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib  
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include

456.hmmer: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc  
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib  
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/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.bzips2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch

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.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive

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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