



# SPEC® CINT2006 Result

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## Hewlett-Packard Company

**SPECint®2006 = 24.3**

ProLiant BL480c  
(3.0 GHz, Intel Xeon processor X5365)

**SPECint\_base2006 = 20.9**

CPU2006 license: 3

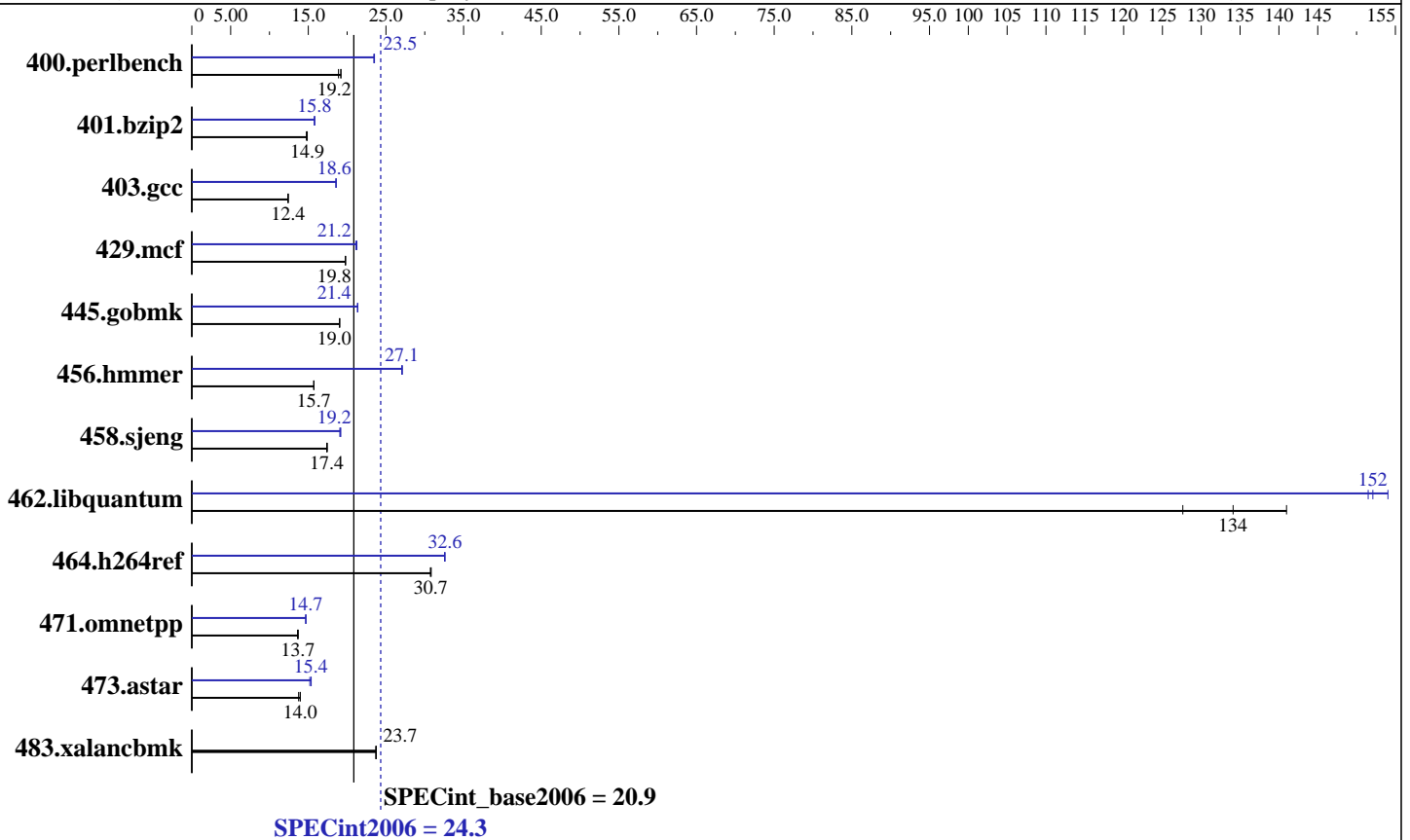
Test date: Sep-2007

Test sponsor: Hewlett-Packard Company

Hardware Availability: Sep-2007

Tested by: Hewlett-Packard Company

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon X5365  
 CPU Characteristics: 3.0G Hz, 2x4 MB L2 shared, 1333 MHz system bus  
 CPU MHz: 3000  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 8 MB I+D on chip per chip, 4 MB shared / 2 cores  
 L3 Cache: None  
 Other Cache: None  
 Memory: 32 GB (8x4 GB PC2-5300F CL5)  
 Disk Subsystem: 1x72 GB 15 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	517	18.9	<u>509</u>	<u>19.2</u>	509	19.2	<u>416</u>	<u>23.5</u>	417	23.4	415	23.5
401.bzip2	649	14.9	<u>649</u>	<u>14.9</u>	654	14.7	<u>610</u>	<u>15.8</u>	612	15.8	610	15.8
403.gcc	<u>649</u>	<u>12.4</u>	650	12.4	648	12.4	434	18.6	433	18.6	<u>433</u>	<u>18.6</u>
429.mcf	<u>461</u>	<u>19.8</u>	461	19.8	461	19.8	429	21.3	432	21.1	<u>430</u>	<u>21.2</u>
445.gobmk	551	19.0	551	19.0	<u>551</u>	<u>19.0</u>	491	21.4	<u>491</u>	<u>21.4</u>	491	21.4
456.hammer	<u>594</u>	<u>15.7</u>	594	15.7	594	15.7	<u>345</u>	<u>27.1</u>	345	27.0	344	27.1
458.sjeng	697	17.4	<u>696</u>	<u>17.4</u>	693	17.5	635	19.1	<u>632</u>	<u>19.2</u>	631	19.2
462.libquantum	162	128	147	141	<u>155</u>	<u>134</u>	137	151	135	154	<u>136</u>	<u>152</u>
464.h264ref	<u>720</u>	<u>30.7</u>	718	30.8	720	30.7	<u>679</u>	<u>32.6</u>	679	32.6	680	32.6
471.omnetpp	<u>457</u>	<u>13.7</u>	456	13.7	459	13.6	<u>426</u>	<u>14.7</u>	425	14.7	426	14.7
473.astar	511	13.8	<u>503</u>	<u>14.0</u>	503	14.0	462	15.2	<u>457</u>	<u>15.4</u>	457	15.4
483.xalancbmk	<u>291</u>	<u>23.7</u>	290	23.8	291	23.7	<u>291</u>	<u>23.7</u>	290	23.8	291	23.7

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 160M
vm.max_map_count=131072
```

## Platform Notes

BIOS configuration:  
Power Regulator set to Static High Performance Mode  
Adjacent Sector Prefetch Enabled  
Hardware Prefetcher Enabled

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc



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## Base Portability Flags

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

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## Peak Portability Flags (Continued)

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

## 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



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## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

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.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.xml>

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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