



# SPEC® CINT2006 Result

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## Hewlett-Packard Company

**SPECint®\_rate2006 = 25.2**

## ProLiant DL585 (AMD Opteron 854)

**SPECint\_rate\_base2006 = 22.3**

CPU2006 license: 3

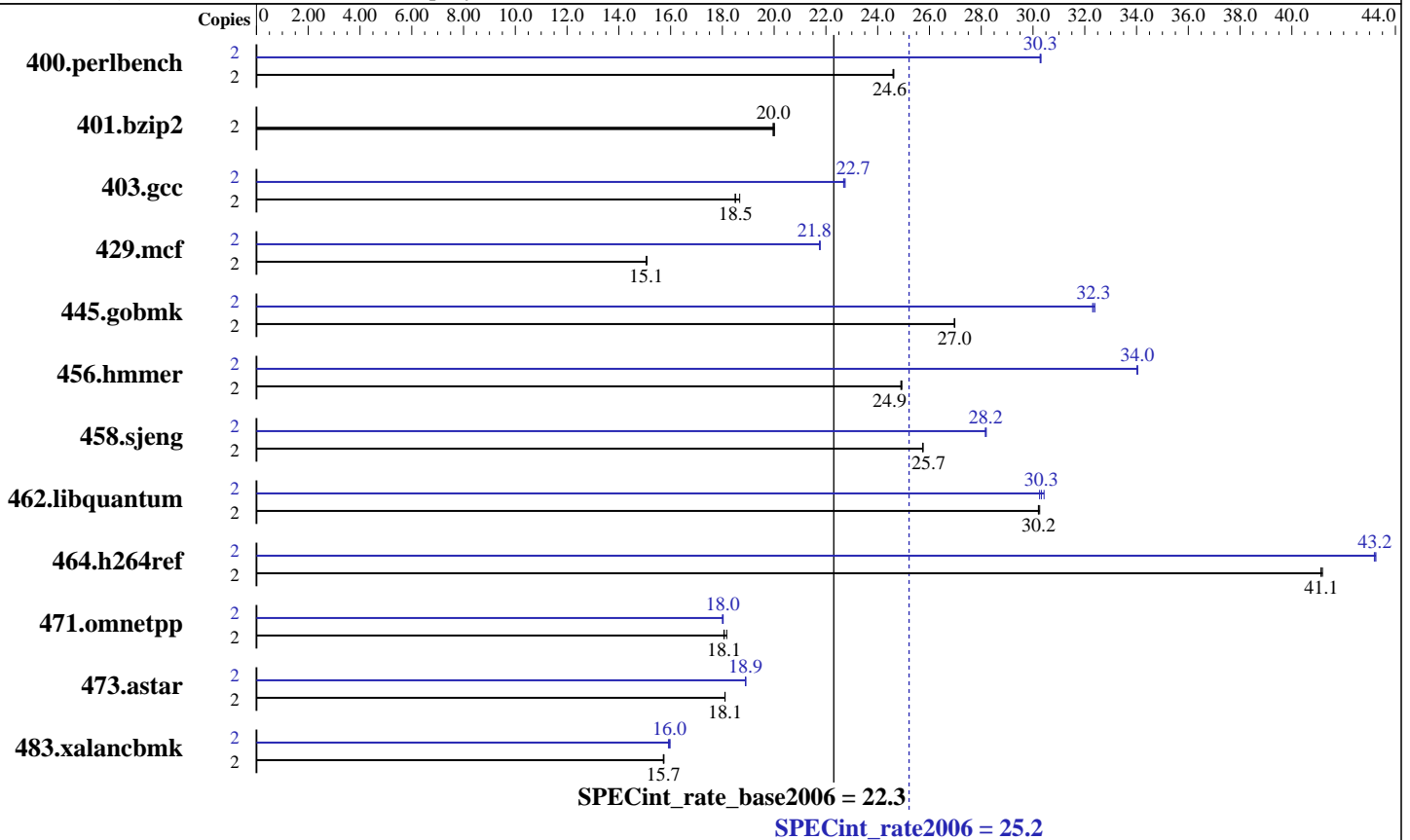
Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Apr-2006

Hardware Availability: Oct-2005

Software Availability: Mar-2006



### Hardware

CPU Name: AMD Opteron 854  
 CPU Characteristics: 2.8GHz, 1MB L2 cache  
 CPU MHz: 2800  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 2 chips, 1 core/chip  
 CPU(s) orderable: 2,4 chips  
 Primary Cache: 64 KB I + 64 KB D on chip per chip  
 Secondary Cache: 1 MB I+D on chip per chip  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (8x2048 MB PC3200 CL3.0)  
 Disk Subsystem: 1x146GB 10K Ultra320 SCSI  
 Other Hardware: None

### Software

Operating System: SuSE Linux Enterprise Server 9 (x86\_64) SP 3  
 SuSE kernel 2.6.5-7.244-smp  
 Compiler: PathScale EKO Compiler Suite, Release 2.4  
 Auto Parallel: No  
 File System: ext2  
 System State: Multi-user run level 3  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: None



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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	2	794	24.6	<b>794</b>	<b>24.6</b>	795	24.6	2	<b>645</b>	<b>30.3</b>	645	30.3	645	30.3
401.bzip2	2	<b>966</b>	<b>20.0</b>	964	20.0	967	20.0	2	<b>966</b>	<b>20.0</b>	964	20.0	967	20.0
403.gcc	2	<b>870</b>	<b>18.5</b>	862	18.7	871	18.5	2	710	22.7	708	22.7	<b>709</b>	<b>22.7</b>
429.mcf	2	1209	15.1	1211	15.1	<b>1211</b>	<b>15.1</b>	2	838	21.8	838	21.8	<b>838</b>	<b>21.8</b>
445.gobmk	2	778	27.0	<b>778</b>	<b>27.0</b>	778	27.0	2	649	32.3	648	32.4	<b>649</b>	<b>32.3</b>
456.hmmer	2	748	24.9	750	24.9	<b>749</b>	<b>24.9</b>	2	<b>548</b>	<b>34.0</b>	548	34.0	548	34.0
458.sjeng	2	940	25.8	940	25.7	<b>940</b>	<b>25.7</b>	2	859	28.2	858	28.2	<b>859</b>	<b>28.2</b>
462.libquantum	2	1372	30.2	<b>1371</b>	<b>30.2</b>	1370	30.3	2	<b>1367</b>	<b>30.3</b>	1362	30.4	1370	30.3
464.h264ref	2	1075	41.2	1076	41.1	<b>1076</b>	<b>41.1</b>	2	1023	43.2	1025	43.2	<b>1024</b>	<b>43.2</b>
471.omnetpp	2	688	18.2	<b>692</b>	<b>18.1</b>	692	18.1	2	<b>694</b>	<b>18.0</b>	693	18.0	694	18.0
473.astar	2	775	18.1	<b>776</b>	<b>18.1</b>	776	18.1	2	743	18.9	<b>743</b>	<b>18.9</b>	743	18.9
483.xalancbmk	2	<b>878</b>	<b>15.7</b>	878	15.7	877	15.7	2	864	16.0	867	15.9	<b>865</b>	<b>16.0</b>

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

## General Notes

BIOS Configuration Notes  
 Node Interleaving Disabled  
 Other Configuration Notes  
 Taskset utility used to bind process to CPU(s)

## Base Compiler Invocation

C benchmarks:  
pathcc

C++ benchmarks:  
pathCC

## Base Portability Flags

400.perlbench: -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

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## Base Portability Flags (Continued)

464.h264ref: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-Ofast

C++ benchmarks:  
-Ofast -m32

## Peak Compiler Invocation

C benchmarks:  
pathcc

C++ benchmarks:  
pathCC

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -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  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -Ofast  
-IPA:plimit=525 -IPA:pu\_reorder=1

401.bzip2: basepeak = yes

403.gcc: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -m32 -O3  
-OPT:Ofast

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## Peak Optimization Flags (Continued)

429.mcf: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -m32 -O2  
-ipa

445.gobmk: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-OPT:alias=disjoint -LNO:simd=0 -LNO:minvariant=off  
-WOPT:retype\_expr=on

456.hmmer: -O2 -OPT:alias=disjoint -WOPT:aggstr=0 -CG:cflow=0

458.sjeng: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-IPA:plimit=50000 -IPA:pu\_reorder=2

462.libquantum: -O3 -ipa -CG:local\_fwd\_sched=on -IPA:space=1000

464.h264ref: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-IPA:plimit=20000 -OPT:alias=disjoint -LNO:prefetch=0

C++ benchmarks:

471.omnetpp: -Ofast -IPA:pu\_reorder=2 -CG:gcm=off -m32

473.astar: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -Ofast

483.xalancbmk: -Ofast -m32 -OPT:unroll\_times\_max=8

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090715.04.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.04.html)

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090715.04.xml](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.04.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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