# SPEC® CINT2006 Result



## Hewlett-Packard Company

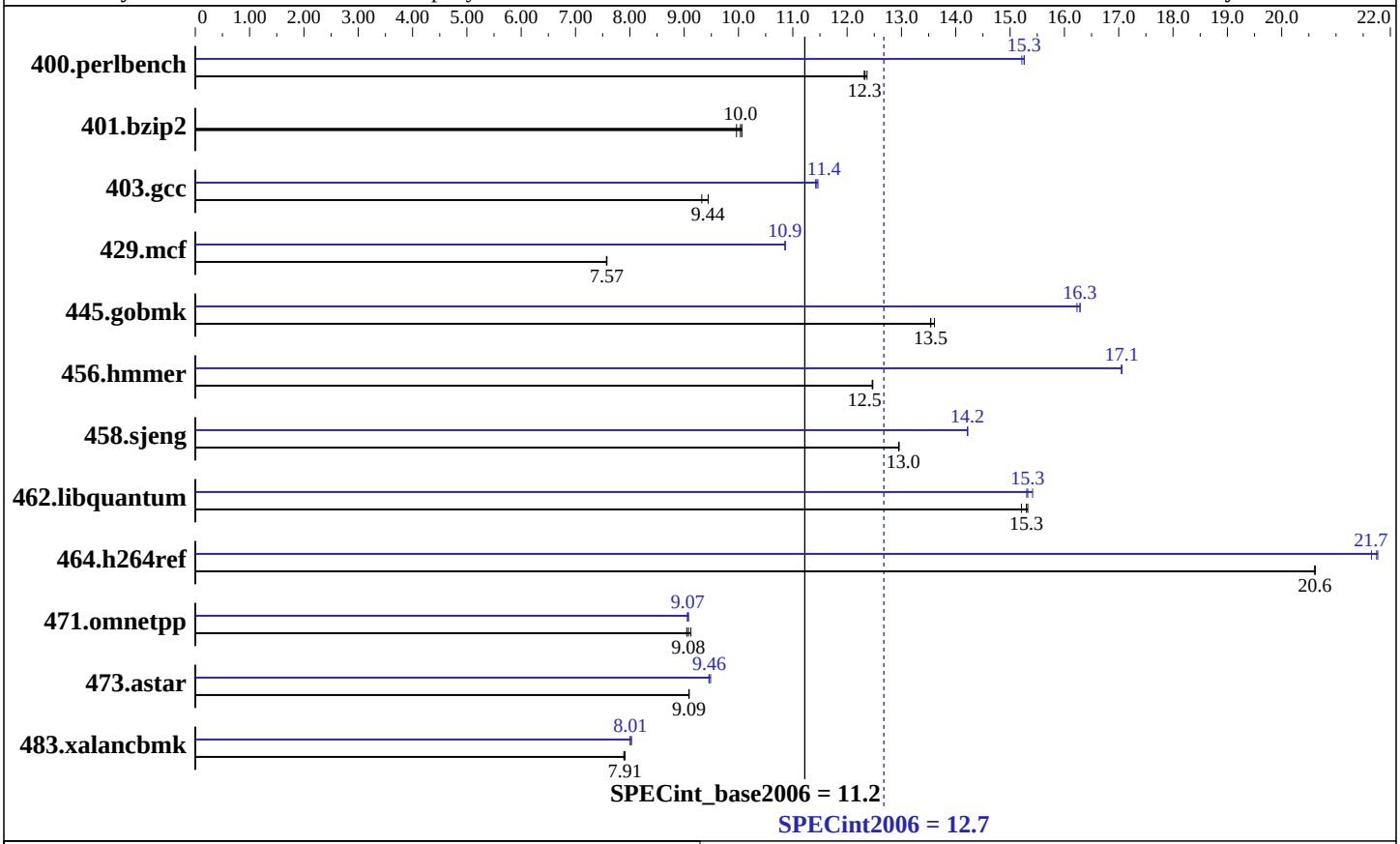
## ProLiant DL585 (AMD Opteron 854)

SPECint®2006 = 12.7

SPECint_base2006 = 11.2

**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<br>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 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 790 | 12.4 | **792** | **12.3** | 793 | 12.3 | 642 | 15.2 | 640 | 15.3 | **640** | **15.3** |
| 401.bzip2 | 959 | 10.1 | **962** | **10.0** | 968 | 9.96 | 959 | 10.1 | **962** | **10.0** | 968 | 9.96 |
| 403.gcc | 853 | 9.44 | **853** | **9.44** | 863 | 9.32 | 705 | 11.4 | 702 | 11.5 | **704** | **11.4** |
| 429.mcf | 1203 | 7.58 | 1205 | 7.57 | **1204** | **7.57** | **840** | **10.9** | 840 | 10.9 | 840 | 10.9 |
| 445.gobmk | 771 | 13.6 | **775** | **13.5** | 775 | 13.5 | 646 | 16.2 | 644 | 16.3 | **644** | **16.3** |
| 456.hmmer | 748 | 12.5 | 749 | 12.5 | **748** | **12.5** | 547 | 17.1 | 547 | 17.0 | **547** | **17.1** |
| 458.sjeng | 934 | 13.0 | **934** | **13.0** | 935 | 12.9 | 851 | 14.2 | 851 | 14.2 | **851** | **14.2** |
| 462.libquantum | 1352 | 15.3 | **1354** | **15.3** | 1362 | 15.2 | 1354 | 15.3 | 1344 | 15.4 | **1352** | **15.3** |
| 464.h264ref | **1074** | **20.6** | 1073 | 20.6 | 1074 | 20.6 | 1022 | 21.7 | 1017 | 21.8 | **1018** | **21.7** |
| 471.omnetpp | 685 | 9.12 | **688** | **9.08** | 691 | 9.05 | 690 | 9.06 | 688 | 9.08 | **689** | **9.07** |
| 473.astar | 772 | 9.09 | 773 | 9.09 | **772** | **9.09** | 740 | 9.49 | **742** | **9.46** | 742 | 9.46 |
| 483.xalancbmk | 872 | 7.91 | **873** | **7.91** | 875 | 7.89 | 862 | 8.01 | 859 | 8.03 | **861** | **8.01** |

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`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.04.xml`



For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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