# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

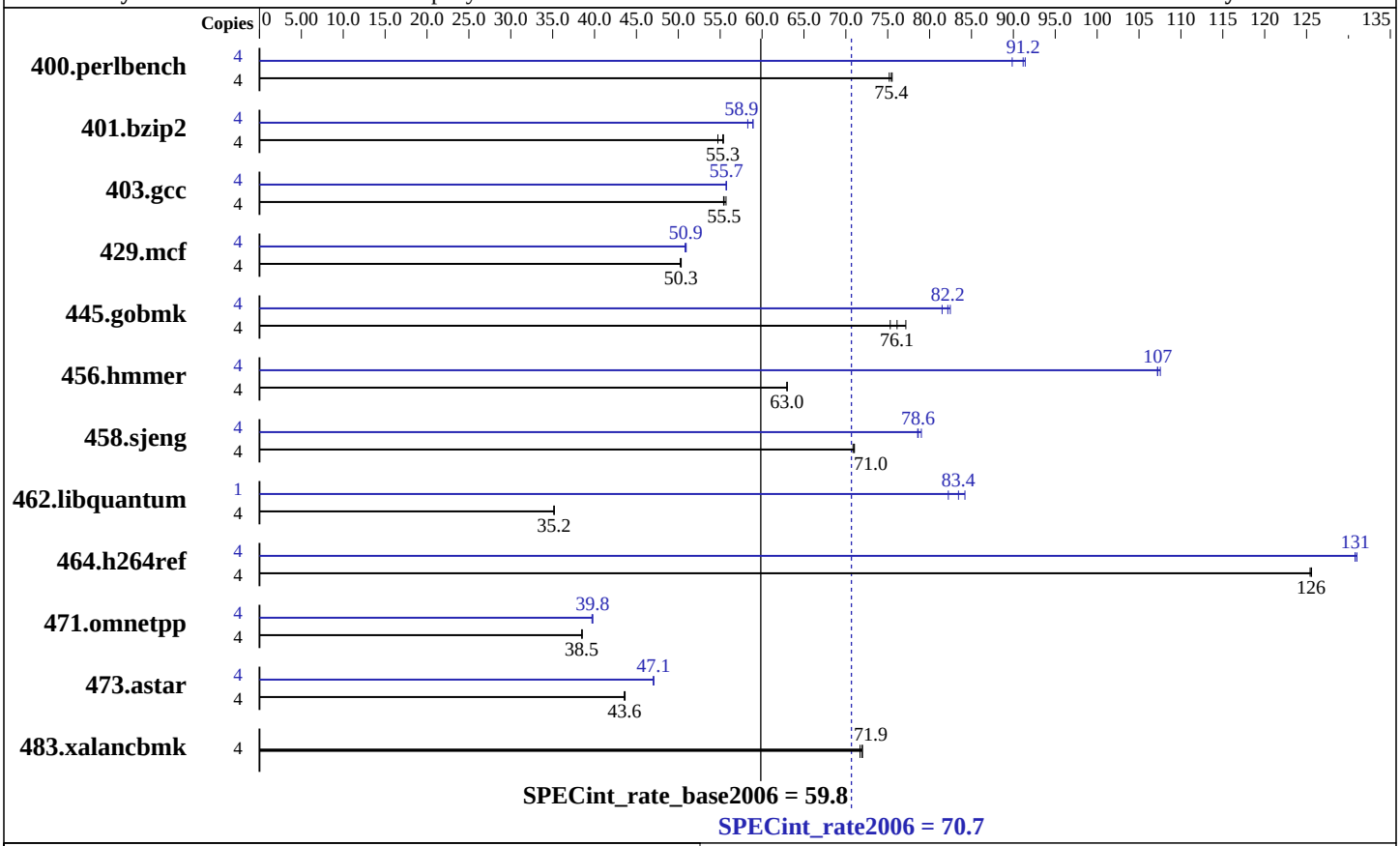
ProLiant BL2x220c G5
(3.00 GHz, Intel Xeon E5450)

SPECint®_rate2006 = 70.7

SPECint_rate_base2006 = 59.8

**CPU2006 license:** 3
**Test sponsor:** Hewlett-Packard Company
**Tested by:** Hewlett-Packard Company

**Test date:** May-2008
**Hardware Availability:** May-2008
**Software Availability:** Nov-2007




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E5450 |
| CPU Characteristics: | 3.00 GHz, 2x6 MB L2 shared, 1333 MHz system bus |
| CPU MHz: | 3000 |
| FPU: | Integrated |
| CPU(s) enabled: | 4 cores, 1 chip, 4 cores/chip |
| CPU(s) orderable: | 2,3,4 chips |
| Primary Cache: | 32 KB I + 32 KB D on chip per core |
| Secondary Cache: | 12 MB I+D on chip per chip, 6 MB shared / 2 cores |
| L3 Cache: | None |
| Other Cache: | None |
| Memory: | 16 GB (4x4 GB PC2-5300P CL5) |
| Disk Subsystem: | 1x120 GB 5.4 K RPM SFF SATA |
| 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 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008 |
| Auto Parallel: | Yes |
| File System: | ext2 |
| System State: | Run level 3 (multi-user) |
| Base Pointers: | 32-bit |
| Peak Pointers: | 32/64-bit |
| Other Software: | MicroQuill SmartHeap Library 8.1 binutils-2.17.50 |

# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Hewlett-Packard Company

ProLiant BL2x220c G5
(3.00 GHz, Intel Xeon E5450)

SPECint_rate2006 = 70.7

SPECint_rate_base2006 = 59.8

**CPU2006 license:** 3
**Test sponsor:** Hewlett-Packard Company
**Tested by:** Hewlett-Packard Company

**Test date:** May-2008
**Hardware Availability:** May-2008
**Software Availability:** Nov-2007

## Results Table

| Benchmark | Base | | | | | | | Peak | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 4 | 520 | 75.2 | **518** | **75.4** | 517 | 75.5 | 4 | 428 | 91.4 | **429** | **91.2** | 435 | 89.9 |
| 401.bzip2 | 4 | 697 | 55.4 | 705 | 54.7 | **698** | **55.3** | 4 | **655** | **58.9** | 662 | 58.3 | 655 | 58.9 |
| 403.gcc | 4 | **580** | **55.5** | 578 | 55.7 | 581 | 55.4 | 4 | **578** | **55.7** | 577 | 55.8 | 578 | 55.7 |
| 429.mcf | 4 | **725** | **50.3** | 726 | 50.2 | 725 | 50.3 | 4 | **717** | **50.9** | 718 | 50.8 | 716 | 50.9 |
| 445.gobmk | 4 | 544 | 77.2 | **551** | **76.1** | 557 | 75.3 | 4 | **511** | **82.2** | 509 | 82.5 | 515 | 81.5 |
| 456.hmmer | 4 | 593 | 63.0 | 592 | 63.0 | **592** | **63.0** | 4 | 347 | 108 | **348** | **107** | 348 | 107 |
| 458.sjeng | 4 | 683 | 70.9 | **682** | **71.0** | 681 | 71.0 | 4 | 616 | 78.6 | 613 | 79.0 | **615** | **78.6** |
| 462.libquantum | 4 | 2355 | 35.2 | **2357** | **35.2** | 2358 | 35.2 | 1 | **248** | **83.4** | 246 | 84.2 | 252 | 82.2 |
| 464.h264ref | 4 | 706 | 125 | 705 | 126 | **705** | **126** | 4 | 677 | 131 | 676 | 131 | **677** | **131** |
| 471.omnetpp | 4 | 650 | 38.5 | **650** | **38.5** | 649 | 38.5 | 4 | 628 | 39.8 | **629** | **39.8** | 630 | 39.7 |
| 473.astar | 4 | 643 | 43.7 | 645 | 43.6 | **644** | **43.6** | 4 | 597 | 47.1 | **597** | **47.1** | 597 | 47.0 |
| 483.xalancbmk | 4 | 383 | 72.0 | **384** | **71.9** | 385 | 71.7 | 4 | 383 | 72.0 | **384** | **71.9** | 385 | 71.7 |

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
  Adjacent Sector Prefetch Disabled
```

## General Notes

```
The ProLiant BL2x220c G5 is comprised of two independent server nodes in a single
chassis. Only one of the server nodes was used for this benchmark; the other server
node was idle during the benchmark. The active server node contained all of the CPUs
and memory described in this disclosure.
```

## Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

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

C++ benchmarks:
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/cpu2006/SmartHeap_8.1/lib -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):
icc

401.bzip2: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include

456.hmmer: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/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

Continued on next page

## Peak Portability Flags (Continued)

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

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/cpu2006/SmartHeap_8.1/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/cpu2006/SmartHeap_8.1/lib -lsmartheap

483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

Continued on next page

## Peak Other Flags (Continued)

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-int-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-int-flags.20090714.xml`


SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.


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

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 17:40:35 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 25 June 2008.