



# SPEC® CINT2006 Result

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## Hewlett-Packard Company

SPECint®\_rate2006 = 61.0

ProLiant ML370 G5  
(1.86 GHz, Intel Xeon processor E5320)

SPECint\_rate\_base2006 = 59.2

CPU2006 license: 3

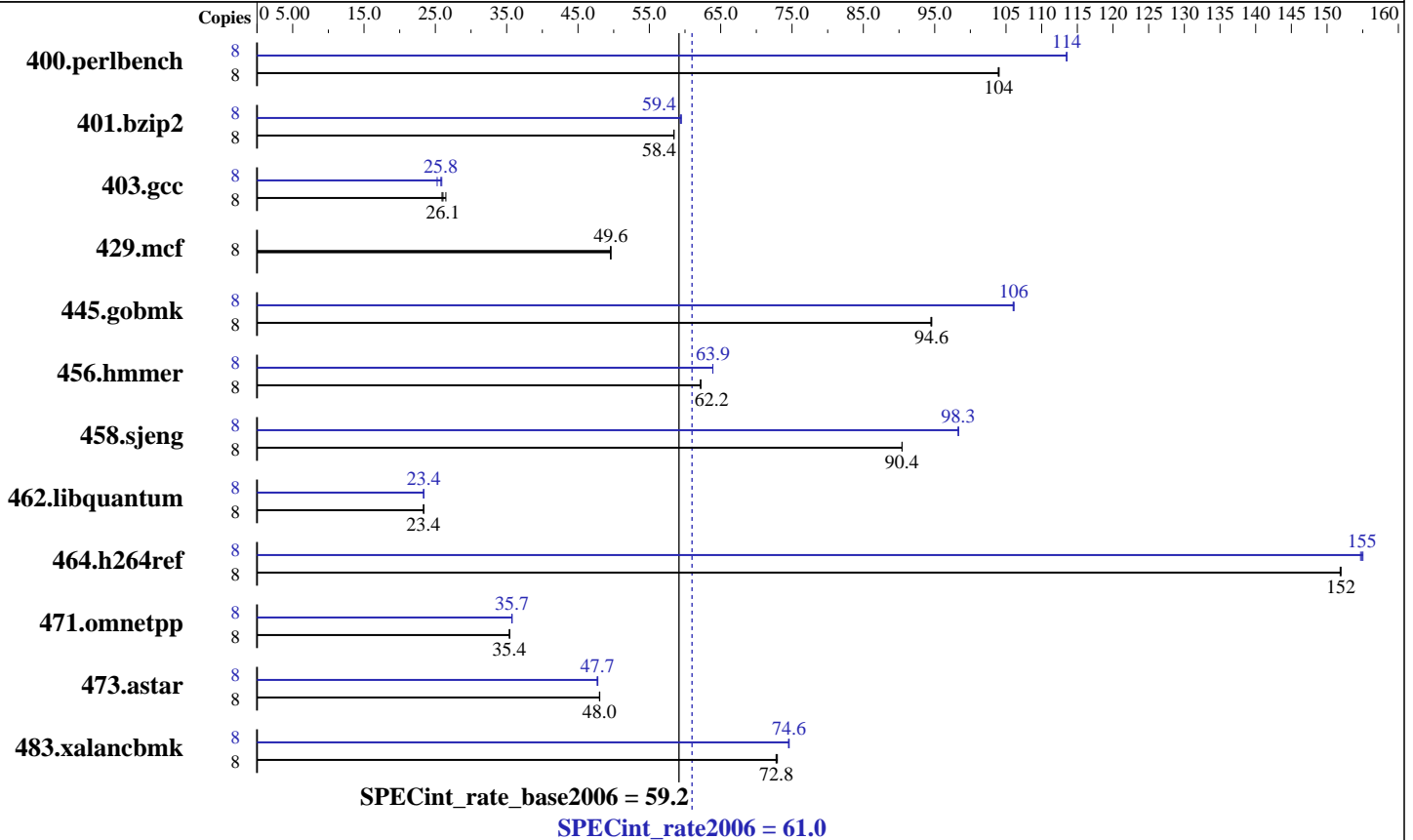
Test date: Feb-2007

Test sponsor: Hewlett-Packard Company

Hardware Availability: Nov-2006

Tested by: Hewlett-Packard Company

Software Availability: Nov-2006



### Hardware

CPU Name: Intel Xeon E5320  
 CPU Characteristics: 1.86 GHz, 2x4 MB L2 shared, 1066 MHz system bus  
 CPU MHz: 1860  
 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: 16 GB (8x2 GB PC2-5300F CL5)  
 Disk Subsystem: 1x72 GB 10 K SAS  
 Other Hardware: None

### Software

Operating System: Windows Server 2003 Enterprise x64 Edition  
 Compiler: Intel C++ Compiler for 32-bit applications, Version 9.1, Build 20061103Z  
 Package ID: W\_CC\_C\_9.1.033  
 Microsoft Visual Studio .NET 2003 (v7.1.3088, for libraries)  
 Auto Parallel: No  
 File System: NTFS  
 System State: Default  
 Base Pointers: 32-bit  
 Peak Pointers: 32-bit  
 Other Software: MicroQuill SmartHeap Library 8.0



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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	8	752	104	751	104	<u>752</u>	<u>104</u>	8	<u>689</u>	<u>114</u>	689	113	688	114
401.bzip2	8	1321	58.4	1320	58.5	<u>1321</u>	<u>58.4</u>	8	<u>1299</u>	<u>59.4</u>	1301	59.3	1298	59.5
403.gcc	8	<u>2471</u>	<u>26.1</u>	2483	25.9	2432	26.5	8	<u>2499</u>	<u>25.8</u>	2486	25.9	2550	25.3
429.mcf	8	1472	49.6	<u>1471</u>	<u>49.6</u>	1471	49.6	8	1472	49.6	<u>1471</u>	<u>49.6</u>	1471	49.6
445.gobmk	8	888	94.5	887	94.6	<u>888</u>	<u>94.6</u>	8	<u>791</u>	<u>106</u>	791	106	792	106
456.hammer	8	<u>1200</u>	<u>62.2</u>	1200	62.2	1200	62.2	8	<u>1168</u>	<u>63.9</u>	1168	63.9	1168	63.9
458.sjeng	8	1070	90.4	1071	90.4	<u>1070</u>	<u>90.4</u>	8	<u>985</u>	<u>98.3</u>	984	98.3	985	98.3
462.libquantum	8	7096	23.4	<u>7096</u>	<u>23.4</u>	7095	23.4	8	<u>7094</u>	<u>23.4</u>	7094	23.4	7094	23.4
464.h264ref	8	1166	152	<u>1165</u>	<u>152</u>	1165	152	8	1144	155	<u>1143</u>	<u>155</u>	1142	155
471.omnetpp	8	1412	35.4	<u>1413</u>	<u>35.4</u>	1413	35.4	8	<u>1399</u>	<u>35.7</u>	1398	35.8	1400	35.7
473.astar	8	1170	48.0	1169	48.0	<u>1169</u>	<u>48.0</u>	8	1175	47.8	<u>1177</u>	<u>47.7</u>	1178	47.7
483.xalancbmk	8	757	72.9	759	72.8	<u>758</u>	<u>72.8</u>	8	<u>740</u>	<u>74.6</u>	741	74.5	740	74.6

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

## Platform Notes

Power Regulator set to Static High Performance Mode in BIOS.  
Adjacent Sector Prefetch disabled in BIOS.

## Base Compiler Invocation

C benchmarks:  
icl -Qvc7.1 -Qc99  
C++ benchmarks:  
icl -Qvc7.1

## Base Portability Flags

403.gcc: -DSPEC\_CPU\_WIN32  
464.h264ref: -DSPEC\_CPU\_NO\_INTTYPES -DWIN32

## Base Optimization Flags

C benchmarks:  
-fast /F512000000 shlw32m.lib -link /FORCE:MULTIPLE

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## Base Optimization Flags (Continued)

C++ benchmarks:

```
-fast -Qcxx_features /F512000000 shlw32m.lib
-link /FORCE:MULTIPLE
```

## Base Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

## Peak Compiler Invocation

C benchmarks:

```
icl -Qvc7.1 -Qc99
```

C++ benchmarks:

```
icl -Qvc7.1
```

## Peak Portability Flags

```
403.gcc: -DSPEC_CPU_WIN32
464.h264ref: -DSPEC_CPU_NO_INTTYPES -DWIN32
```

## Peak Optimization Flags

C benchmarks:

```
400.perlbench: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F512000000
shlw32m.lib -link /FORCE:MULTIPLE
```

```
401.bzip2: Same as 400.perlbench
```

```
403.gcc: Same as 400.perlbench
```

```
429.mcf: basepeak = yes
```

```
445.gobmk: Same as 400.perlbench
```

```
456.hmmmer: Same as 400.perlbench
```

```
458.sjeng: Same as 400.perlbench
```

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## Peak Optimization Flags (Continued)

462.libquantum: Same as 400.perlbench

464.h264ref: Same as 400.perlbench

C++ benchmarks:

-Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qcxx\_features  
/F512000000 shlw32m.lib -link /FORCE:MULTIPLE

## 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-ic91-flags.20090715.02.html>

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

<http://www.spec.org/cpu2006/flags/hp-ic91-flags.20090715.02.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.0.  
Report generated on Tue Jul 22 10:50:44 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 20 March 2007.