



# SPEC® CINT2006 Result

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## Hewlett-Packard Company

**SPECint®2006 = 12.3**

HP Integrity rx3600  
(1.6GHz/18MB Dual-Core Intel Itanium 2)

**SPECint\_base2006 = 11.6**

CPU2006 license: 03

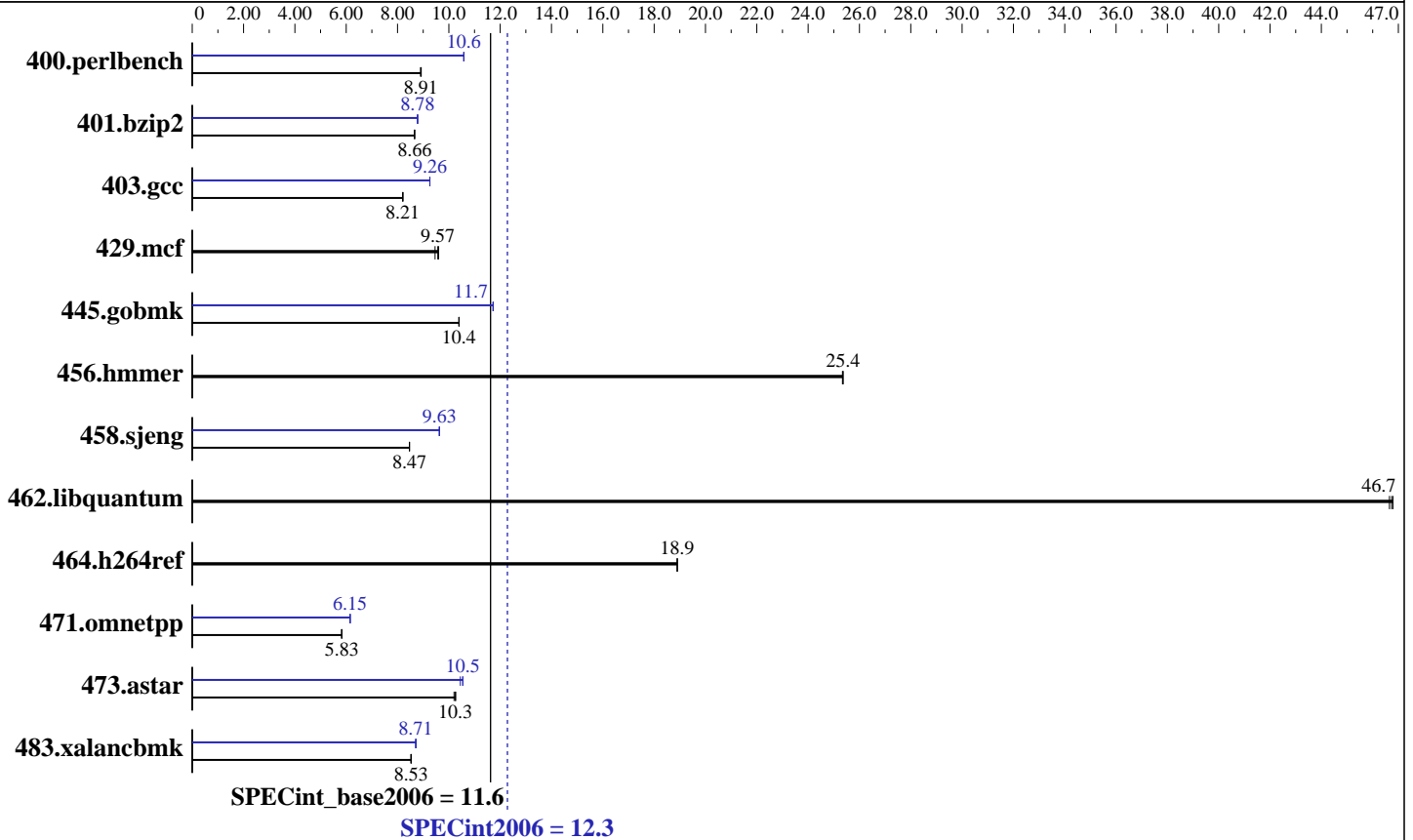
Test date: Nov-2006

Test sponsor: Hewlett-Packard Company

Hardware Availability: Nov-2006

Tested by: Hewlett-Packard Company

Software Availability: Nov-2006



### Hardware

CPU Name: Dual-Core Intel Itanium 2 9040  
 CPU Characteristics: 1.6GHz/18MB, 533MHz FSB  
 CPU MHz: 1600  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip  
 CPU(s) orderable: 1-2 chips  
 Primary Cache: 16 KB I + 16 KB D on chip per core  
 Secondary Cache: 1 MB I + 256 KB D on chip per core  
 L3 Cache: 9 MB I+D on chip per core  
 Other Cache: None  
 Memory: 16 GB (8x2GB DIMMs, AD124A 8-DIMM memory carrier)  
 Disk Subsystem: 2x73GB 10K RPM SAS (mirrored)  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux AS release 4 (Update 4)  
 Compiler: Intel C++ Compiler for Itanium version 9.1 (Build 20060818)  
 Auto Parallel: No  
 File System: ext3  
 System State: Multi-user  
 Base Pointers: 64-bit  
 Peak Pointers: 64-bit  
 Other Software: MicroQuill Smartheap 8.0



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<b><u>1096</u></b>	<b><u>8.91</u></b>	1095	8.92	1098	8.90	923	10.6	924	10.6	<b><u>923</u></b>	<b><u>10.6</u></b>
401.bzip2	1114	8.66	<b><u>1114</u></b>	<b><u>8.66</u></b>	1114	8.67	1098	8.79	1100	8.77	<b><u>1099</u></b>	<b><u>8.78</u></b>
403.gcc	<b><u>981</u></b>	<b><u>8.21</u></b>	981	8.21	981	8.20	869	9.26	870	9.26	<b><u>869</u></b>	<b><u>9.26</u></b>
429.mcf	<b><u>953</u></b>	<b><u>9.57</u></b>	950	9.60	964	9.46	<b><u>953</u></b>	<b><u>9.57</u></b>	950	9.60	964	9.46
445.gobmk	1009	10.4	1009	10.4	<b><u>1009</u></b>	<b><u>10.4</u></b>	894	11.7	895	11.7	<b><u>895</u></b>	<b><u>11.7</u></b>
456.hmmer	<b><u>368</u></b>	<b><u>25.4</u></b>	368	25.4	368	25.3	<b><u>368</u></b>	<b><u>25.4</u></b>	368	25.4	368	25.3
458.sjeng	1429	8.47	1430	8.46	<b><u>1429</u></b>	<b><u>8.47</u></b>	1256	9.63	<b><u>1256</u></b>	<b><u>9.63</u></b>	1257	9.63
462.libquantum	444	46.7	<b><u>443</u></b>	<b><u>46.7</u></b>	443	46.8	444	46.7	<b><u>443</u></b>	<b><u>46.7</u></b>	443	46.8
464.h264ref	1171	18.9	<b><u>1171</u></b>	<b><u>18.9</u></b>	1171	18.9	1171	18.9	<b><u>1171</u></b>	<b><u>18.9</u></b>	1171	18.9
471.omnetpp	<b><u>1073</u></b>	<b><u>5.83</u></b>	1072	5.83	1074	5.82	1016	6.15	1015	6.15	<b><u>1016</u></b>	<b><u>6.15</u></b>
473.astar	684	10.3	688	10.2	<b><u>685</u></b>	<b><u>10.3</u></b>	672	10.4	<b><u>666</u></b>	<b><u>10.5</u></b>	666	10.5
483.xalancbmk	808	8.54	810	8.52	<b><u>809</u></b>	<b><u>8.53</u></b>	793	8.70	791	8.73	<b><u>792</u></b>	<b><u>8.71</u></b>

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

## Operating System Notes

stacksize set to unlimited prior to run

system was booted uniprocessor by setting "maxcpus=0"  
kernel parameter in elilo.conf

## Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

## Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_IA64  
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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## Portability Flags (Continued)

464.h264ref: -DSPEC\_CPU\_LP64  
471.omnetpp: -DSPEC\_CPU\_LP64  
473.astar: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-fast -IPF\_fp\_relaxed -ansi-alias

C++ benchmarks:

-fast -IPF\_fp\_relaxed -ansi-alias -Wl,-z,muldefs  
/opt/SmartHeap\_8/lib/libsmartheapC64.a  
/opt/SmartHeap\_8/lib/libsmartheap64.a

## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof\_gen(pass 1) -prof\_use(pass 2) -fast -IPF\_fp\_relaxed  
-ansi-alias

401.bzip2: Same as 400.perlbench

403.gcc: Same as 400.perlbench

429.mcf: basepeak = yes

445.gobmk: Same as 400.perlbench

456.hmmmer: basepeak = yes

458.sjeng: Same as 400.perlbench

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -prof\_gen(pass 1) -prof\_use(pass 2) -fast -IPF\_fp\_relaxed  
-ansi-alias -Wl,-z,muldefs  
/opt/SmartHeap\_8/lib/libsmartheapC64.a  
/opt/SmartHeap\_8/lib/libsmartheap64.a

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## Peak Optimization Flags (Continued)

```
473.astar: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed
          -ansi-alias -inline-factor=150 -Wl,-z,muldefs
          /opt/SmartHeap_8/lib/libsmartheapC64.a
          /opt/SmartHeap_8/lib/libsmartheap64.a
```

483.xalancbmk: Same as 471.omnetpp

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

[http://www.spec.org/cpu2006/flags/IPF\\_intel91\\_flags.html](http://www.spec.org/cpu2006/flags/IPF_intel91_flags.html)

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

[http://www.spec.org/cpu2006/flags/IPF\\_intel91\\_flags.xml](http://www.spec.org/cpu2006/flags/IPF_intel91_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).

Tested with SPEC CPU2006 v1.0.  
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