



SPEC® CINT2006 Result

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Hewlett-Packard Company

SPECint®2006 = 12.5

HP Integrity rx4640
(1.6GHz/24MB Dual-Core Intel Itanium 2)

SPECint_base2006 = 11.8

CPU2006 license: 03

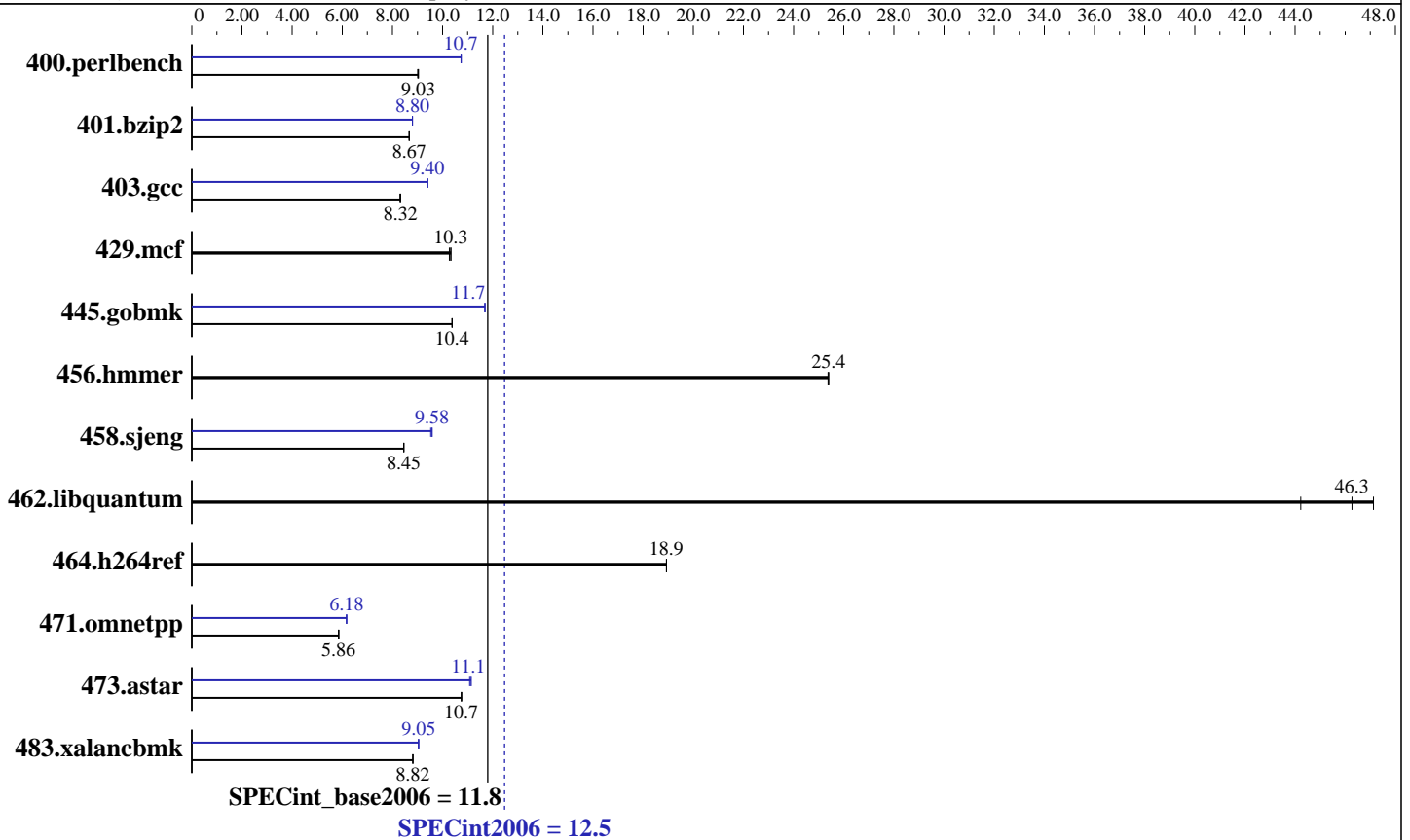
Test date: Oct-2006

Test sponsor: Hewlett-Packard Company

Hardware Availability: Sep-2006

Tested by: Hewlett-Packard Company

Software Availability: Nov-2006



Hardware

CPU Name: Dual-Core Intel Itanium 2 9050
 CPU Characteristics: 1.6GHz/24MB, 400MHz FSB
 CPU MHz: 1600
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip
 CPU(s) orderable: 1-4 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: 12 MB I+D on chip per core
 Other Cache: None
 Memory: 32 GB (16x2GB DIMMs)
 Disk Subsystem: 36GB 15K RPM SCSI
 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	1081	9.04	1085	9.01	1081	9.03	910	10.7	909	10.7	910	10.7
401.bzip2	1113	8.67	1113	8.67	1113	8.67	1097	8.80	1097	8.80	1097	8.80
403.gcc	967	8.32	967	8.32	970	8.30	856	9.40	856	9.40	856	9.40
429.mcf	882	10.3	888	10.3	883	10.3	882	10.3	888	10.3	883	10.3
445.gobmk	1010	10.4	1010	10.4	1011	10.4	897	11.7	897	11.7	897	11.7
456.hmmer	367	25.4	368	25.4	367	25.4	367	25.4	368	25.4	367	25.4
458.sjeng	1431	8.45	1431	8.45	1431	8.45	1270	9.53	1263	9.58	1263	9.58
462.libquantum	448	46.3	440	47.1	469	44.2	448	46.3	440	47.1	469	44.2
464.h264ref	1169	18.9	1169	18.9	1169	18.9	1169	18.9	1169	18.9	1169	18.9
471.omnetpp	1066	5.86	1067	5.86	1068	5.85	1012	6.18	1012	6.18	1014	6.17
473.astar	653	10.7	652	10.8	653	10.7	634	11.1	630	11.1	631	11.1
483.xalancbmk	782	8.82	783	8.81	782	8.82	762	9.05	764	9.04	763	9.05

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

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

http://www.spec.org/cpu2006/flags/IPF_intel91_flags.xml

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