SPEC® CINT2006 Result

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Hewlett-Packard Company
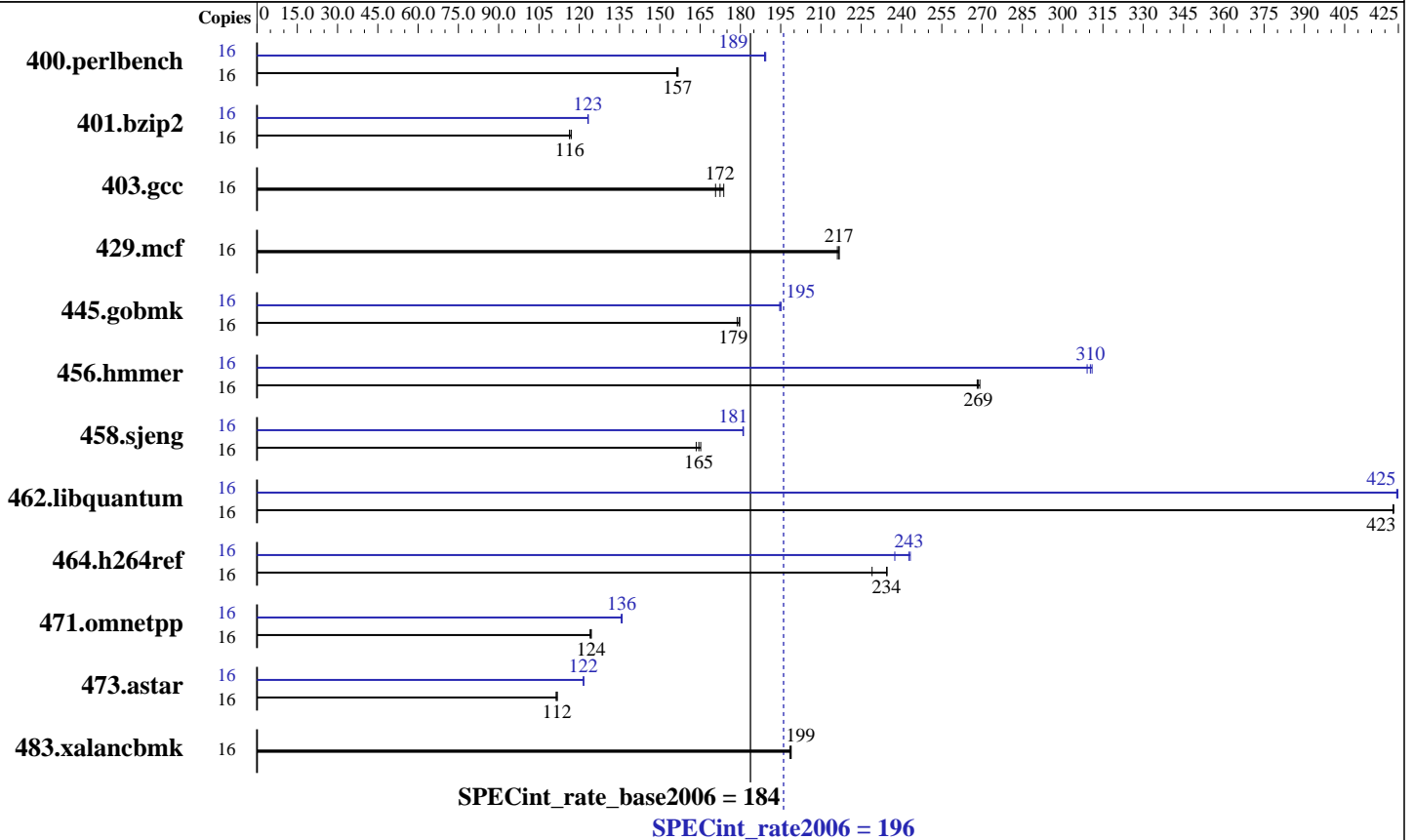
ProLiant BL620c G7
(2.27 GHz, Intel Xeon X7560)

SPECint®_rate2006 =   196

SPECint_rate_base2006 =   184

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Oct-2010

Hardware Availability: Nov-2010

Software Availability: Apr-2010

Copies 0 15.0 30.0 45.0 60.0 75.0 90.0 105 120 135 150 165 180 195 210 225 240 255 270 285 300 315 330 345 360 375 390 405 425

Benchmark	Copies	Value
400.perlbench	16 / 16	189 / 157
401.bzip2	16 / 16	123 / 116
403.gcc	16	172
429.mcf	16	217
445.gobmk	16 / 16	195 / 179
456.hmmer	16 / 16	310 / 269
458.sjeng	16 / 16	181 / 165
462.libquantum	16 / 16	425 / 423
464.h264ref	16 / 16	243 / 234
471.omnetpp	16 / 16	136 / 124
473.astar	16 / 16	122 / 112
483.xalancbmk	16	199

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Hardware

CPU Name: Intel Xeon X7560

CPU Characteristics: Intel Turbo Boost Technology up to 2.67 GHz

CPU MHz: 2267

FPU: Integrated

CPU(s) enabled: 8 cores, 1 chip, 8 cores/chip, 2 threads/core

CPU(s) orderable: 1,2 chips

Primary Cache: 32 KB I + 32 KB D on chip per core

Secondary Cache: 256 KB I+D on chip per core

L3 Cache: 24 MB I+D on chip per chip

Other Cache: None

Memory: 128 GB (32 x 4 GB 2Rx4 PC3-10600R-9, ECC)

Disk Subsystem: 1x146 GB 10 K SAS

Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 5.5
Kernel 2.6.18-194.el5

Compiler: Intel C++ Compiler 11.1 for Linux
Build 20100414 Package ID: l_cproc_p_11.1.072

Auto Parallel: No

File System: ext3

System State: Run level 3 (multi-user)

Base Pointers: 32-bit

Peak Pointers: 32/64-bit

Other Software: Microquill SmartHeap V8.1
Binutils 2.17.50.0.6-14.el5

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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	16	**998**	**157**	1000	156	997	157	16	**826**	**189**	825	189	827	189
401.bzip2	16	**1326**	**116**	1327	116	1319	117	16	1251	123	1253	123	**1253**	**123**
403.gcc	16	741	174	**747**	**172**	754	171	16	741	174	**747**	**172**	754	171
429.mcf	16	**673**	**217**	675	216	673	217	16	**673**	**217**	675	216	673	217
445.gobmk	16	939	179	934	180	**935**	**179**	16	860	195	**861**	**195**	862	195
456.hmmer	16	**556**	**269**	557	268	555	269	16	**481**	**310**	480	311	483	309
458.sjeng	16	1184	164	1172	165	**1177**	**165**	16	1069	181	1070	181	**1070**	**181**
462.libquantum	16	783	423	**784**	**423**	784	423	16	780	425	781	424	**781**	**425**
464.h264ref	16	1546	229	1509	235	**1510**	**234**	16	1455	243	1491	237	**1459**	**243**
471.omnetpp	16	806	124	804	124	**804**	**124**	16	**736**	**136**	737	136	735	136
473.astar	16	1009	111	**1006**	**112**	1005	112	16	**924**	**122**	923	122	924	122
483.xalancbmk	16	556	198	555	199	**555**	**199**	16	556	198	555	199	**555**	**199**

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

Platform Notes

```
BIOS configuration:
 HP Power Profile set to Maximum Performance
 Thermal Configuration set to Increased Cooling
```

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
```

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Base Optimization Flags

C benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static -inline-calloc
-opt-malloc-options=3 -opt-prefetch
```

C++ benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -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/Compiler/11.1/072/bin/intel64/icc`

456.hmmer: `/opt/intel/Compiler/11.1/072/bin/intel64/icc`

458.sjeng: `/opt/intel/Compiler/11.1/072/bin/intel64/icc`

C++ benchmarks:
```
icpc
```

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
401.bzip2: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
458.sjeng: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

Continued on next page

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Peak Optimization Flags (Continued)

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -ansi-alias

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -opt-prefetch -ansi-alias -auto-ilp32

403.gcc: basepeak = yes

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2
-ipo -no-prec-div -ansi-alias

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2
-ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -unroll4 -auto-ilp32

462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32
-opt-prefetch

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
-L/cpu2006/SmartHeap_8.1/lib -lsmartheap

473.astar: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-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:

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Peak Other Flags (Continued)

403.gcc: `-Dalloca=_alloca`

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revF.html
http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20100525.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revF.xml
http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20100525.xml

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

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