SPEC® CINT2006 Result

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Hewlett-Packard Company

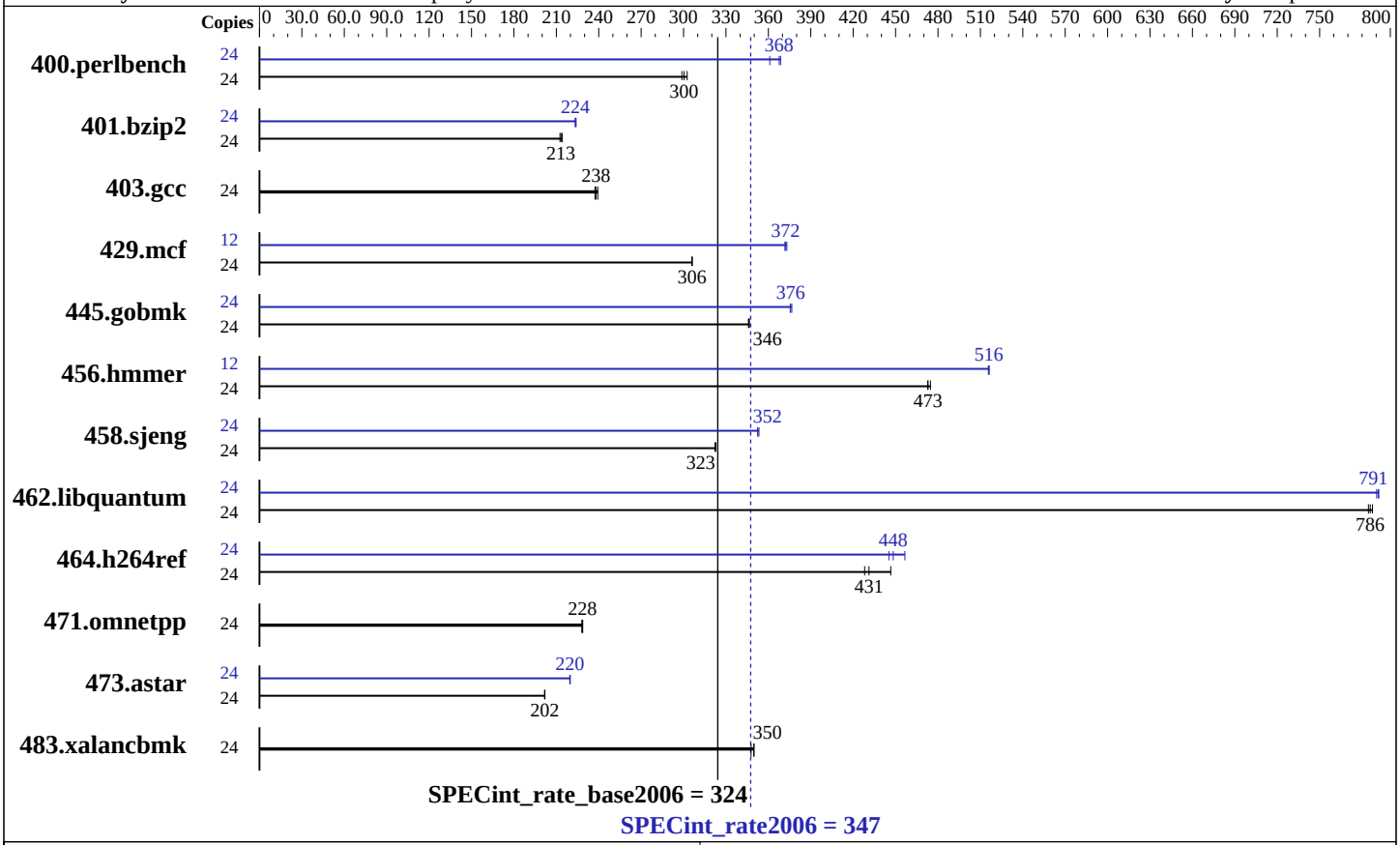
ProLiant BL460c G7
(2.93 GHz, Intel Xeon X5670)

SPECint®_rate2006 = 347

SPECint_rate_base2006 = 324

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

Test date: Sep-2010
Hardware Availability: Oct-2010
Software Availability: Apr-2010



Hardware

CPU Name:	Intel Xeon X5670
CPU Characteristics:	Intel Turbo Boost Technology up to 3.33 GHz
CPU MHz:	2933
FPU:	Integrated
CPU(s) enabled:	12 cores, 2 chips, 6 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:	12 MB I+D on chip per chip
Other Cache:	None
Memory:	48 GB (12x4 GB 2Rx4 PC3-10600R CL9, ECC)
Disk Subsystem:	2 x 146 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

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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	24	775	303	785	299	**781**	**300**	24	**638**	**368**	636	369	650	361
401.bzip2	24	**1086**	**213**	1089	213	1081	214	24	1037	223	**1036**	**224**	1034	224
403.gcc	24	**812**	**238**	807	239	814	237	24	**812**	**238**	807	239	814	237
429.mcf	24	715	306	715	306	**715**	**306**	12	**294**	**372**	293	373	294	372
445.gobmk	24	**727**	**346**	728	346	726	347	24	**670**	**376**	669	377	670	375
456.hmmer	24	472	475	474	473	**473**	**473**	12	217	516	217	516	**217**	**516**
458.sjeng	24	900	323	**900**	**323**	901	322	24	**824**	**352**	822	353	824	352
462.libquantum	24	634	785	**633**	**786**	632	787	24	629	790	628	792	**628**	**791**
464.h264ref	24	1241	428	1189	447	**1232**	**431**	24	1163	457	1193	445	**1185**	**448**
471.omnetpp	24	656	229	658	228	**657**	**228**	24	656	229	658	228	**657**	**228**
473.astar	24	834	202	**835**	**202**	836	202	24	766	220	768	219	**767**	**220**
483.xalancbmk	24	473	350	**473**	**350**	476	348	24	473	350	**473**	**350**	476	348

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

Submit Notes

```
The config file option 'submit' was used.
numactl was used to bind copies to the cores
```

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
 Data Reuse set to Disabled
```

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:
-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

Continued on next page

Peak Portability Flags (Continued)

483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

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 -opt-prefetch

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: -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

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
-opt-malloc-options=3 -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: basepeak = yes

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:

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`

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

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