SPEC® CINT2006 Result

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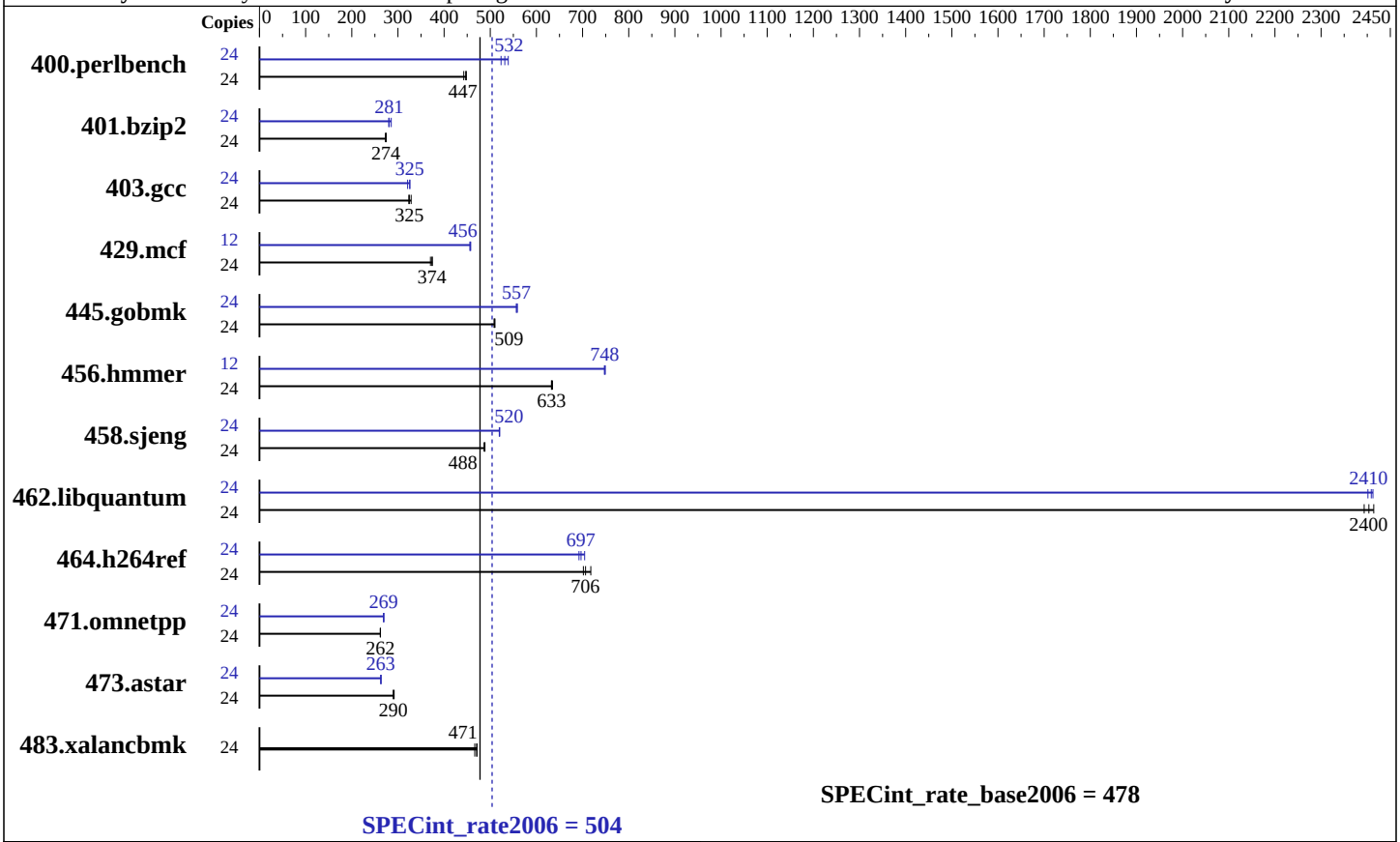
Cryo Performance Computing Ltd
Cryo Octane EDP-WS

SPECint®_rate2006 = 504

SPECint_rate_base2006 = 478

CPU2006 license: 3979
Test sponsor: Cryo Performance Computing Ltd
Tested by: Cryo Performance Computing Ltd

Test date: Mar-2011
Hardware Availability: Dec-2010
Software Availability: Dec-2010



Hardware

CPU Name:	Intel Xeon X5680
CPU Characteristics:	Intel Turbo Boost Technology disabled
CPU MHz:	4500
FPU:	Integrated
CPU(s) enabled:	12 cores, 2 chips, 6 cores/chip, 2 threads/core
CPU(s) orderable:	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:	24 GB (6 x 4 GB 2Rx4 PC3-12800U-9, running at 1440 MHz and CL8)
Disk Subsystem:	1 x 120 GB Corsair Force Series SSD
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 11 (x86_64) SP1, Kernel 2.6.32.12-0.7-default
Compiler:	Intel C++ Professional Compiler for IA32 and Intel 64, Version 12 Build 12.0.2.137 Package ID: l_ccompxe_2011.2.137, l_fcompxe_2011.2.137
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 V9.01

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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	523	448	530	443	**525**	**447**	24	**441**	**532**	435	539	448	523
401.bzip2	24	**846**	**274**	843	275	849	273	24	**824**	**281**	827	280	811	285
403.gcc	24	588	329	**595**	**325**	597	324	24	602	321	**594**	**325**	593	326
429.mcf	24	591	370	584	375	**586**	**374**	12	240	456	**240**	**456**	239	458
445.gobmk	24	495	509	**495**	**509**	493	510	24	**452**	**557**	452	557	451	559
456.hmmer	24	**354**	**633**	354	633	353	635	12	150	747	**150**	**748**	149	749
458.sjeng	24	**595**	**488**	597	487	594	488	24	559	520	558	520	**559**	**520**
462.libquantum	24	208	2390	**207**	**2400**	206	2410	24	**206**	**2410**	206	2410	207	2400
464.h264ref	24	757	702	**752**	**706**	740	718	24	754	704	767	692	**762**	**697**
471.omnetpp	24	572	262	**573**	**262**	573	262	24	557	269	**557**	**269**	557	269
473.astar	24	577	292	581	290	**581**	**290**	24	641	263	640	263	**640**	**263**
483.xalancbmk	24	355	466	351	471	**352**	**471**	24	355	466	351	471	**352**	**471**

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
```

General Notes

```
 OMP_NUM_THREADS set to number of cores
 Hyper-Threading Technology Enabled
 KMP_AFFINITY set to granularity=fine,scatter
 KMP_STACKSIZE set to 200M
```

Base Compiler Invocation

C benchmarks:

```
icc  -m32
```

C++ benchmarks:

```
icpc -m32
```

Base Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
462.libquantum: `-DSPEC_CPU_LINUX`

Continued on next page

Base Portability Flags (Continued)

483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/home/cryo/cpu2006/lib -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m32

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

462.libquantum: icc -m64

C++ benchmarks (except as noted below):
icpc -m32

473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64

Continued on next page

Peak Portability Flags (Continued)

462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
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

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: -xSSE4.2 -ipo -O3 -no-prec-div -static

429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -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 -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/home/cryo/cpu2006/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/home/cryo/cpu2006/lib -lsmartheap64

Continued on next page

Peak Optimization Flags (Continued)

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-ic12.0-linux64-revB.html`
`http://www.spec.org/cpu2006/flags/Cryo-platform-linux64-revA.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml`
`http://www.spec.org/cpu2006/flags/Cryo-platform-linux64-revA.xml`

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

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 17:24:20 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 8 April 2011.