SPEC® CINT2006 Result
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HITACHI

BladeSymphony BS320 (Intel Xeon E5620)

$SPECint^{®}\_rate2006 = 226$

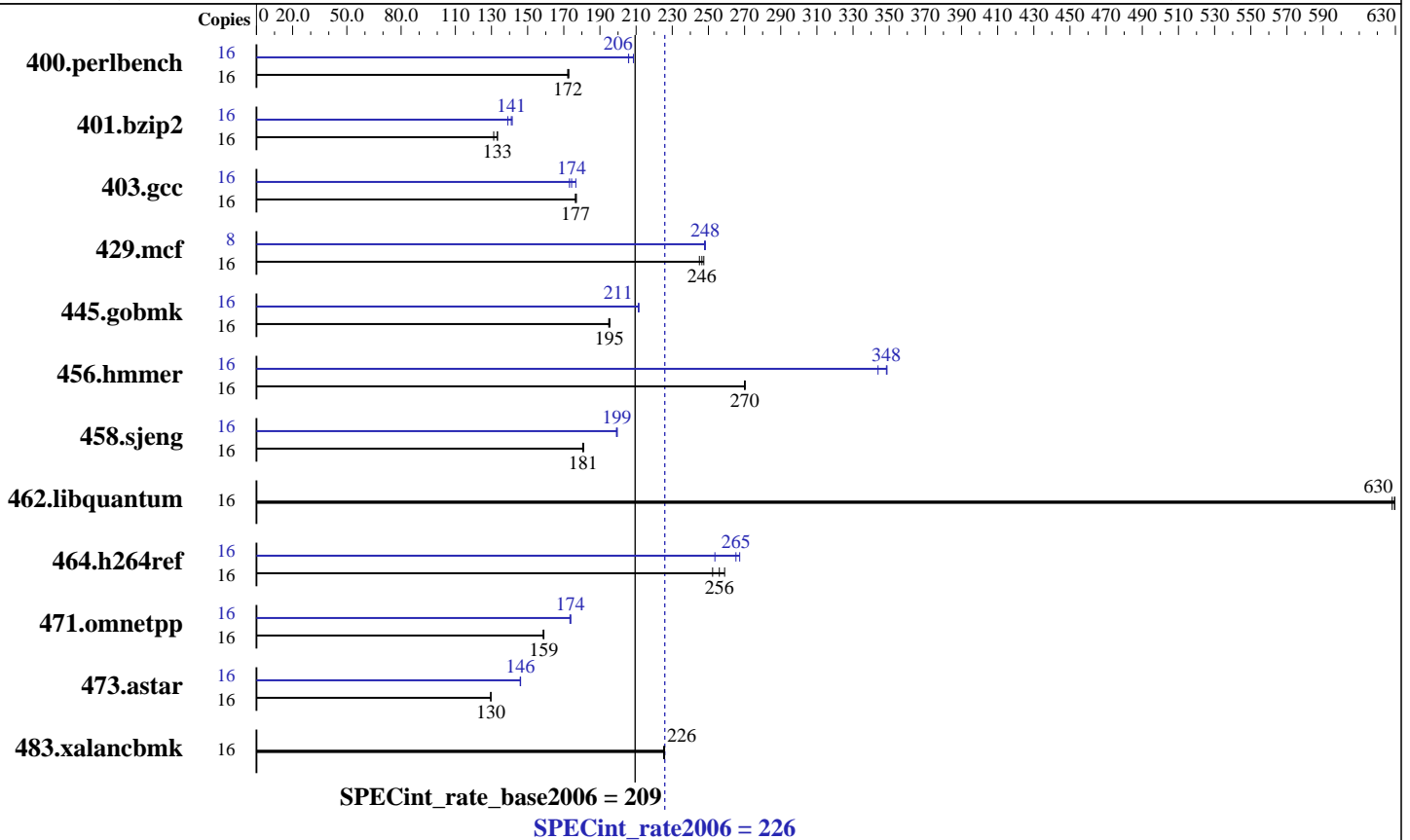$SPECint\_rate\_base2006 = 209$

CPU2006 license: 872
Test sponsor: HITACHI
Tested by: HITACHI

Test date: Jul-2010
Hardware Availability: Mar-2010
Software Availability: Dec-2009

Copies 0 20.0 50.0 80.0 110 130 150 170 190 210 230 250 270 290 310 330 350 370 390 410 430 450 470 490 510 530 550 570 590 630

- 400.perlbench: 16 → 206; 16 → 172
- 401.bzip2: 16 → 141; 16 → 133
- 403.gcc: 16 → 174; 16 → 177
- 429.mcf: 8 → 248; 16 → 246
- 445.gobmk: 16 → 211; 16 → 195
- 456.hmmer: 16 → 348; 16 → 270
- 458.sjeng: 16 → 199; 16 → 181
- 462.libquantum: 16 → 630
- 464.h264ref: 16 → 265; 16 → 256
- 471.omnetpp: 16 → 174; 16 → 159
- 473.astar: 16 → 146; 16 → 130
- 483.xalancbmk: 16 → 226

SPECint_rate_base2006 = 209

SPECint_rate2006 = 226

Hardware

CPU Name: Intel Xeon E5620
CPU Characteristics: Intel Turbo Boost Technology up to 2.67 GHz
CPU MHz: 2400
FPU: Integrated
CPU(s) enabled: 8 cores, 2 chips, 4 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: 24 GB (6 x 4 GB PC3-10600R, 2 rank, CL9-9-9)
Disk Subsystem: 1 x 73 GB 10000 rpm SAS
Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 5.4.3, Advanced Platform, Kernel 2.6.18-164.9.1.el5 on an x86_64
Compiler: Intel C++ Compiler 11.1 for Linux Build 20091012 Package ID: l_cproc_p_11.1.059
Auto Parallel: No
File System: ext3
System State: Multi-user run level 3
Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V8.1

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Results Table

Benchmark	Base Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Peak Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	16	**907**	**172**	905	173	908	172	16	750	209	760	206	**759**	**206**
401.bzip2	16	1177	131	**1158**	**133**	1158	133	16	1110	139	**1095**	**141**	1091	141
403.gcc	16	730	176	728	177	**729**	**177**	16	729	177	**739**	**174**	744	173
429.mcf	16	596	245	590	247	**592**	**246**	8	294	248	**294**	**248**	294	248
445.gobmk	16	859	195	861	195	**860**	**195**	16	793	212	795	211	**794**	**211**
456.hmmer	16	552	270	**553**	**270**	553	270	16	428	349	**428**	**348**	434	344
458.sjeng	16	1070	181	1073	180	**1072**	**181**	16	970	200	972	199	**971**	**199**
462.libquantum	16	528	628	**527**	**630**	527	630	16	528	628	**527**	**630**	527	630
464.h264ref	16	1367	259	1403	252	**1383**	**256**	16	**1335**	**265**	1325	267	1396	254
471.omnetpp	16	**629**	**159**	629	159	631	159	16	**576**	**174**	575	174	577	173
473.astar	16	867	130	**866**	**130**	866	130	16	**769**	**146**	770	146	769	146
483.xalancbmk	16	**489**	**226**	490	225	489	226	16	**489**	**226**	490	225	489	226

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.
'/usr/bin/numactl' used to bind processes to CPUs
```

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
```

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
483.xalancbmk: -DSPEC_CPU_LINUX
```

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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/bsc/smartheap/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`

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`
    462.libquantum: `-DSPEC_CPU_LINUX`
    473.astar: `-DSPEC_CPU_LP64`
    483.xalancbmk: `-DSPEC_CPU_LINUX`

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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: `basepeak = yes`

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/bsc/smartheap/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/bsc/smartheap/lib -lsmartheap64`

483.xalancbmk: `basepeak = yes`

Peak Other Flags

C benchmarks:

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Peak Other Flags (Continued)

403.gcc: -Dalloca=_alloca

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100929.03.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100929.03.xml

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