SPEC® CINT2006 Result
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IBM Corporation

IBM System x iDataPlex dx360 M2 (Intel Xeon E5530)

SPECint®_rate2006 =   208

SPECint_rate_base2006 = 194

CPU2006 license: 11	**Test date:** Jul-2009
Test sponsor: IBM Corporation	**Hardware Availability:** Aug-2009
Tested by: IBM Corporation	**Software Availability:** Feb-2009

Copies 0 20.0 50.0 80.0 110 130 150 170 190 210 230 250 270 290 310 330 350 370 390 410 430 450 470 490 510 530 550 570 590 610 640

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483.xalancbmk 16 / 220

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Hardware

CPU Name:	Intel Xeon E5530
CPU Characteristics:	Intel Turbo Boost Technology up to 2.66 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:	8 MB I+D on chip per chip
Other Cache:	None
Memory:	24 GB (12 x 2 GB PC3-10600R, 2 Rank, running at 1066 MHz)
Disk Subsystem:	1 x 250 GB SATA, 7200RPM
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 10 (x86_64) SP2 with patch Linux kernel 20090119, Kernel 2.6.16.60-0.34-smp
Compiler:	Intel C++ Compiler Professional 11.0 for Linux Build 20090131 Package ID: l_cproc_p_11.0.080
Auto Parallel:	No
File System:	ReiserFS
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V8.1 Binutils 2.18.50.0.7.20080502

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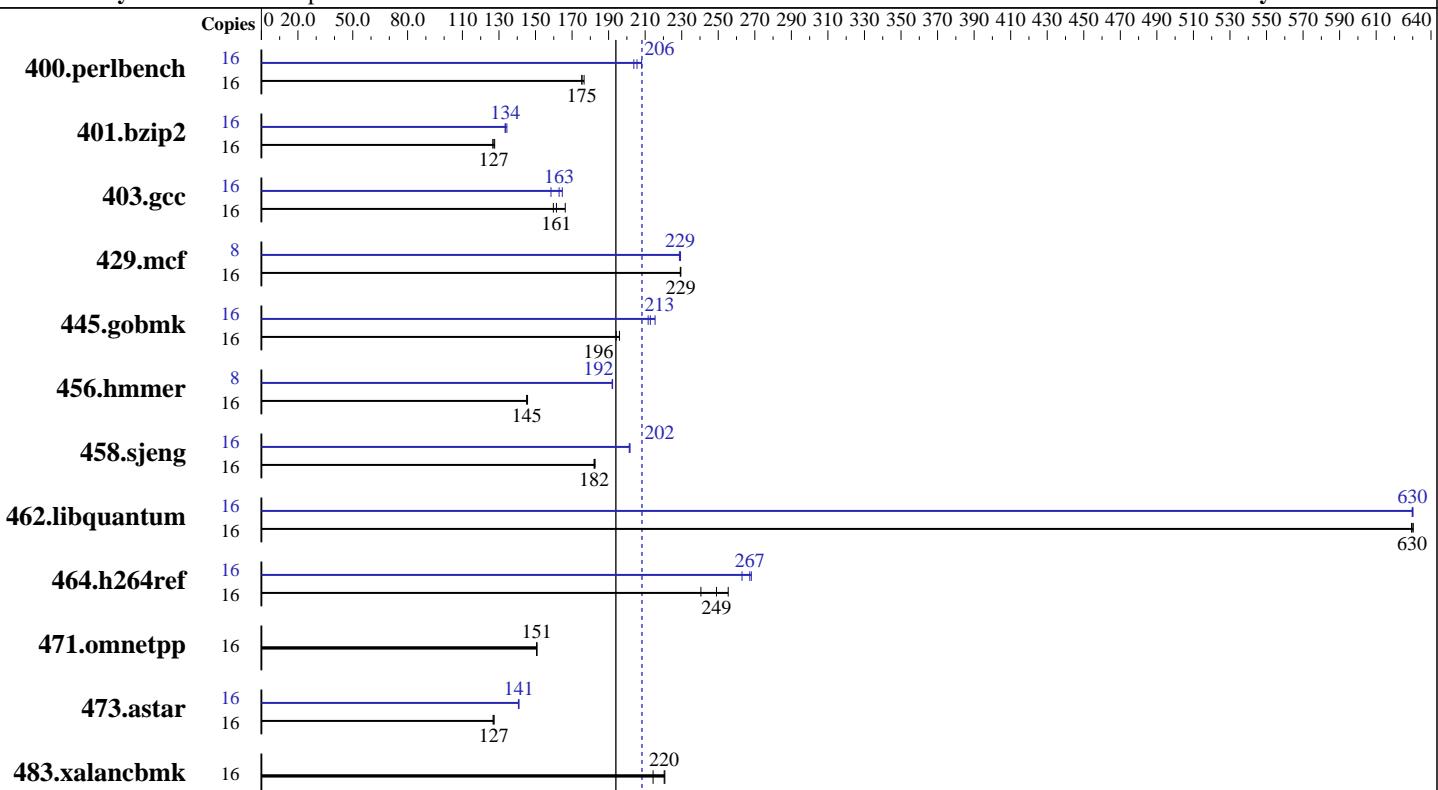
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Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	16	891	175	885	177	**891**	**175**	16	767	204	**761**	**206**	751	208
401.bzip2	16	1220	127	**1214**	**127**	1209	128	16	1158	133	**1155**	**134**	1149	134
403.gcc	16	775	166	806	160	**798**	**161**	16	782	165	813	158	**791**	**163**
429.mcf	16	636	229	637	229	**636**	**229**	8	319	229	**318**	**229**	318	229
445.gobmk	16	**857**	**196**	864	194	856	196	16	779	215	**789**	**213**	793	212
456.hmmer	16	1028	145	1025	146	**1028**	**145**	8	389	192	**388**	**192**	388	192
458.sjeng	16	1060	183	**1063**	**182**	1063	182	16	**961**	**202**	962	201	960	202
462.libquantum	16	527	629	**526**	**630**	526	630	16	526	630	526	630	**526**	**630**
464.h264ref	16	1386	255	**1422**	**249**	1472	241	16	1321	268	**1325**	**267**	1346	263
471.omnetpp	16	664	151	663	151	**664**	**151**	16	664	151	663	151	**664**	**151**
473.astar	16	882	127	886	127	**883**	**127**	16	797	141	799	141	**797**	**141**
483.xalancbmk	16	**501**	**220**	500	221	515	214	16	**501**	**220**	500	221	515	214

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

```
     'ulimit -s unlimited' was used to set the stack size to unlimited prior to run
     Turbo Mode Enable
```

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/spec/cpu2006.1.1/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/11.0/080/bin/intel64/icc`

456.hmmer: `/opt/intel/Compiler/11.0/080/bin/intel64/icc`

458.sjeng: `/opt/intel/Compiler/11.0/080/bin/intel64/icc`

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

473.astar: `/opt/intel/Compiler/11.0/080/bin/intel64/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`
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` `-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: `-xSSE4.2` `-ipo` `-O3` `-no-prec-div` `-static` `-inline-calloc`
`-opt-malloc-options=3`

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` `-auto-ilp32`
`-Wl,-z,muldefs` `-L/spec/cpu2006.1.1/lib` `-lsmartheap64`

483.xalancbmk: `basepeak = yes`

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Peak Other Flags

C benchmarks:

      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-ic11.0-int-linux64-revA.20091028.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20091028.xml`

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

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