SPEC® CINT2006 Result
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IBM Corporation
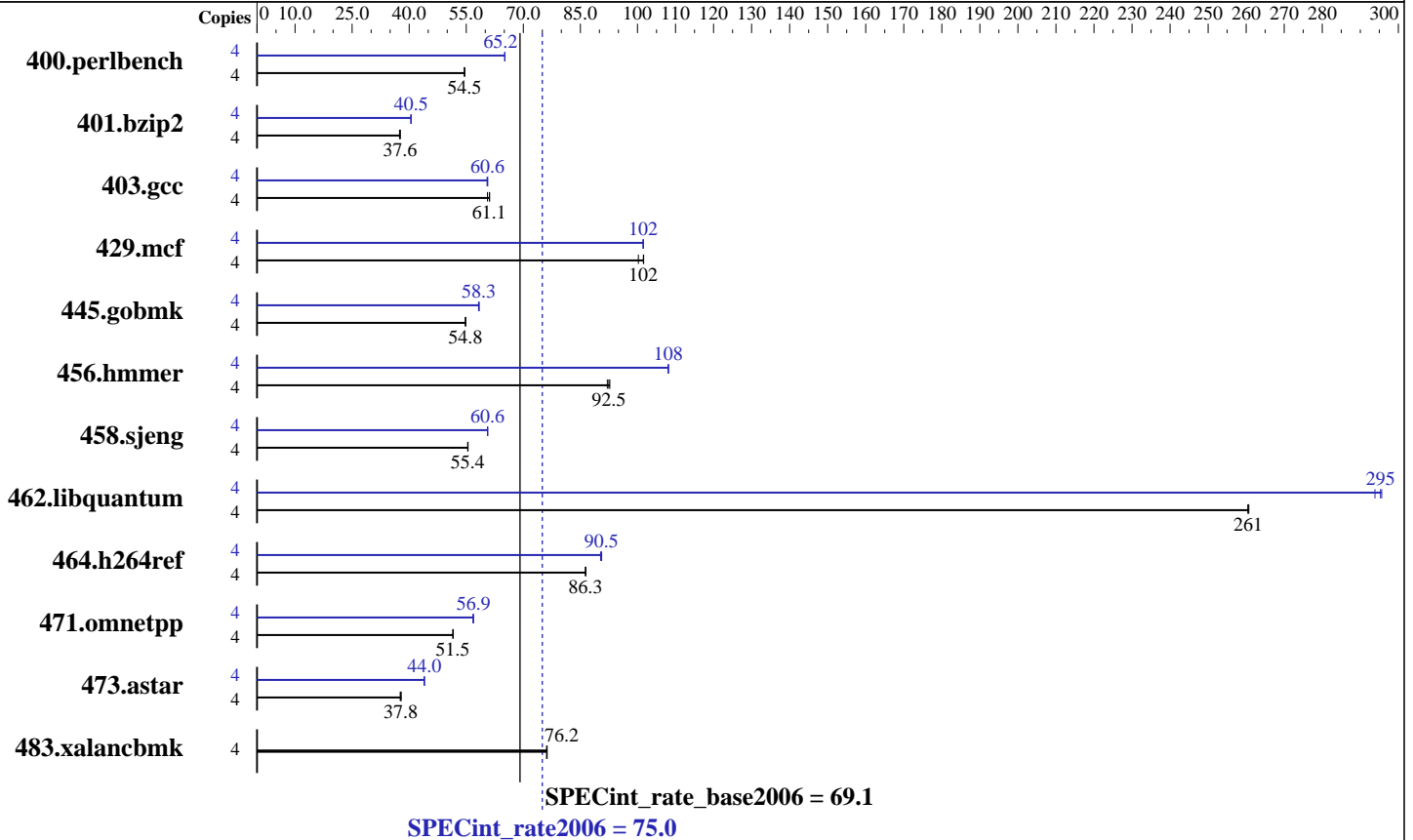
IBM System x iDataPlex dx360 M3 (Intel Xeon E5502)

SPECint®_rate2006 = 75.0

SPECint_rate_base2006 = 69.1

CPU2006 license: 11　　**Test date:** Jul-2010
Test sponsor: IBM Corporation　　**Hardware Availability:** Jun-2010
Tested by: IBM Corporation　　**Software Availability:** Jan-2010

SPECint_rate_base2006 = 69.1

SPECint_rate2006 = 75.0

Hardware
CPU Name: Intel Xeon E5502
CPU Characteristics:
CPU MHz: 1867
FPU: Integrated
CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
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: 4 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (12 x 4 GB PC3-10600R CL9, 2 Rank)
Disk Subsystem: 1 x 250 GB SATA, 7200 RPM
Other Hardware: None

Software
Operating System: SuSe Linux Enterprise Server 11 (x86_64),
　　Kernel 2.6.27.19-5-default
Compiler: Intel C++ Professional Compiler for IA32 and
　　Intel 64, Version 11.1
　　Build 20091130 Package ID: l_cproc_p_11.1.064
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	4	717	54.5	716	54.6	**716**	**54.5**	4	600	65.1	**600**	**65.2**	600	65.2
401.bzip2	4	**1026**	**37.6**	1031	37.5	1025	37.7	4	952	40.5	955	40.4	**953**	**40.5**
403.gcc	4	**527**	**61.1**	527	61.1	532	60.6	4	**531**	**60.6**	533	60.5	531	60.6
429.mcf	4	364	100	**359**	**102**	359	102	4	359	102	**359**	**102**	360	101
445.gobmk	4	**766**	**54.8**	765	54.9	766	54.8	4	718	58.4	721	58.2	**720**	**58.3**
456.hmmer	4	**404**	**92.5**	405	92.1	402	92.7	4	345	108	345	108	**345**	**108**
458.sjeng	4	872	55.5	**873**	**55.4**	874	55.4	4	798	60.6	**798**	**60.6**	799	60.6
462.libquantum	4	**318**	**261**	318	261	318	260	4	282	294	280	296	**281**	**295**
464.h264ref	4	1024	86.4	**1025**	**86.3**	1025	86.3	4	**978**	**90.5**	980	90.3	977	90.6
471.omnetpp	4	**486**	**51.5**	486	51.5	485	51.6	4	440	56.8	**439**	**56.9**	439	56.9
473.astar	4	**743**	**37.8**	741	37.9	746	37.6	4	639	43.9	638	44.0	**638**	**44.0**
483.xalancbmk	4	363	76.1	362	76.3	**362**	**76.2**	4	363	76.1	362	76.3	**362**	**76.2**

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

Platform Notes

    Turbo Mode Enable
    Turbo Boost set to Traditional
    CPU C State Enable

General Notes

    Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502
    'ulimit -s unlimited' was used to set the stack size to unlimited prior to run

Base Compiler Invocation

C benchmarks:
     icc -m32

C++ benchmarks:
     icpc -m32

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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 -opt-prefetch
```

C++ benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -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
```

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Peak Portability Flags (Continued)

```
    456.hmmer: -DSPEC_CPU_LP64
    458.sjeng: -DSPEC_CPU_LP64
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/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -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
```

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Peak Optimization Flags (Continued)

473.astar (continued):
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64

483.xalancbmk: basepeak = yes

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-ic11.1-linux64-revE.20100804.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.20100804.xml

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

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