SPEC® CINT2006 Result
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Bull SAS

NovaScale T840 F2 (Intel Xeon L5630, 2.13 GHz)

SPECint®_rate2006 =   190

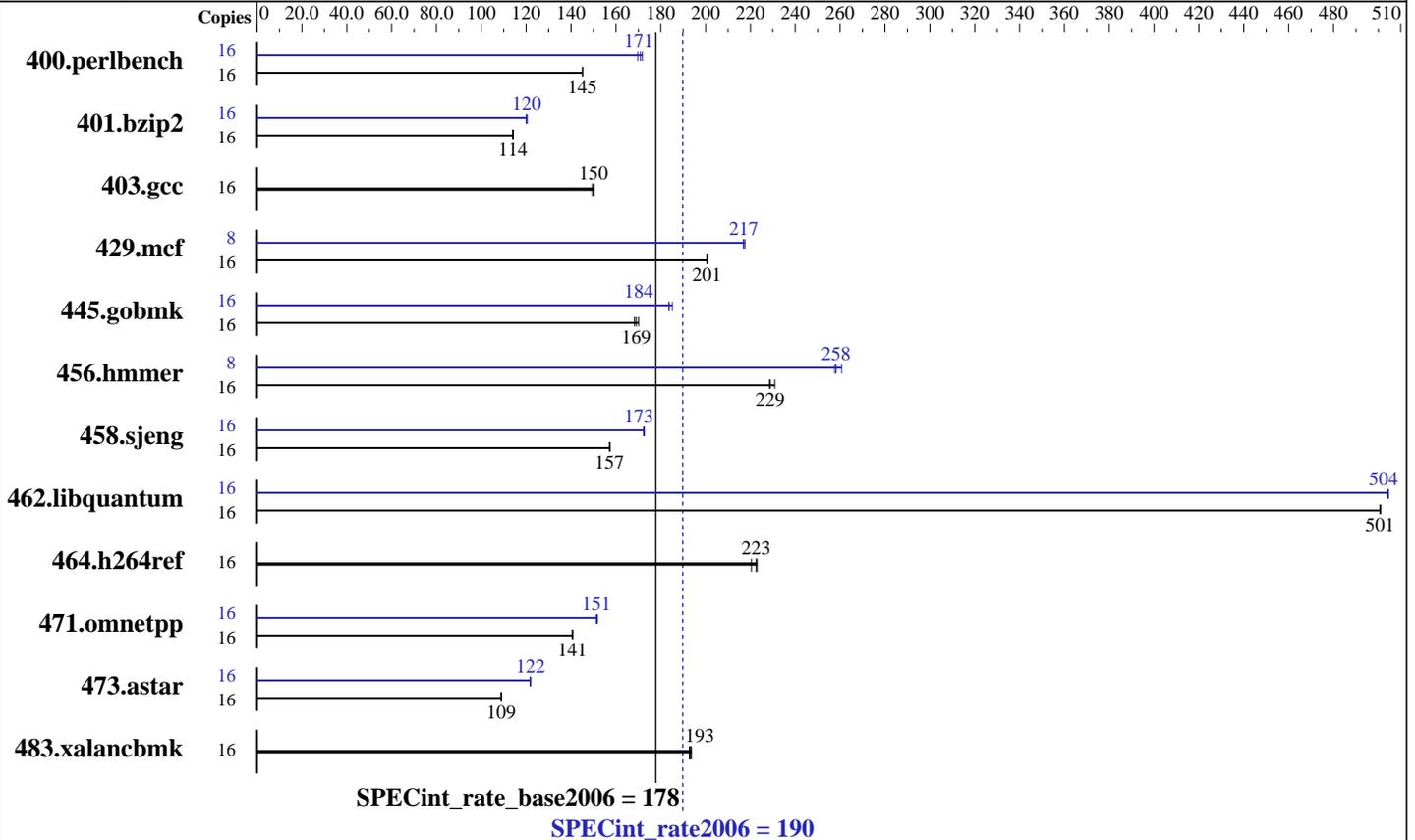SPECint_rate_base2006 =   178

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Dell Inc.

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

Benchmark results (Copies):

- 400.perlbench: 16 / 171 (blue), 16 / 145
- 401.bzip2: 16 / 120 (blue), 16 / 114
- 403.gcc: 16 / 150
- 429.mcf: 8 / 217 (blue), 16 / 201
- 445.gobmk: 16 / 184 (blue), 16 / 169
- 456.hmmer: 8 / 258 (blue), 16 / 229
- 458.sjeng: 16 / 173 (blue), 16 / 157
- 462.libquantum: 16 / 504 (blue), 16 / 501
- 464.h264ref: 16 / 223
- 471.omnetpp: 16 / 151 (blue), 16 / 141
- 473.astar: 16 / 122 (blue), 16 / 109
- 483.xalancbmk: 16 / 193

SPECint_rate_base2006 = 178

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Hardware

CPU Name: Intel Xeon L5630
CPU Characteristics: Intel Turbo Boost Technology up to 2.40 GHz
CPU MHz: 2133
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: 48 GB (12 x 4 GB DDR3-1333 DR RDIMM, CL9, ECC, downclocked to 1066 MHz)
Disk Subsystem: 1 x 146 GB 15000 RPM SAS
Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-smp
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	16	1077	145	**1077**	**145**	1077	145	16	**914**	**171**	910	172	921	170
401.bzip2	16	1351	114	**1353**	**114**	1354	114	16	1281	121	**1285**	**120**	1287	120
403.gcc	16	857	150	**859**	**150**	862	149	16	857	150	**859**	**150**	862	149
429.mcf	16	728	201	**727**	**201**	727	201	8	**336**	**217**	335	218	336	217
445.gobmk	16	986	170	997	168	**992**	**169**	16	**913**	**184**	906	185	914	184
456.hmmer	16	647	231	**652**	**229**	653	228	8	286	261	**289**	**258**	290	258
458.sjeng	16	**1231**	**157**	1230	157	1231	157	16	**1121**	**173**	1124	172	1121	173
462.libquantum	16	662	501	662	501	**662**	**501**	16	657	505	**657**	**504**	658	504
464.h264ref	16	1588	223	**1591**	**223**	1606	220	16	1588	223	**1591**	**223**	1606	220
471.omnetpp	16	712	141	710	141	**711**	**141**	16	661	151	**661**	**151**	659	152
473.astar	16	1032	109	1031	109	**1031**	**109**	16	923	122	921	122	**921**	**122**
483.xalancbmk	16	**572**	**193**	573	193	570	194	16	**572**	**193**	573	193	570	194

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 Settings:
    Power Management = Maximum Performance (Default = Active Power Controller)
    Data Reuse = Disabled (Default = Enabled)
```

General Notes

```
    Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502
    The Dell PowerEdge T610 and
    the Bull NovaScale T840 F2 models are electronically equivalent.
    The results have been measured on a Dell PowerEdge T610 model.
```

Base Compiler Invocation

```
C benchmarks:
      icc  -m32
```

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Base Compiler Invocation (Continued)

C++ benchmarks:
    icpc -m32

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

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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_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: basepeak = yes

          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: basepeak = yes
```

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.20100330.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.20100330.xml

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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 11:32:12 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 20 July 2010.