SPEC® CINT2006 Result
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Bull SAS

NovaScale T860
(Intel Xeon processor E5320,1.86GHz)

$SPECint^®2006 =$ 14.0
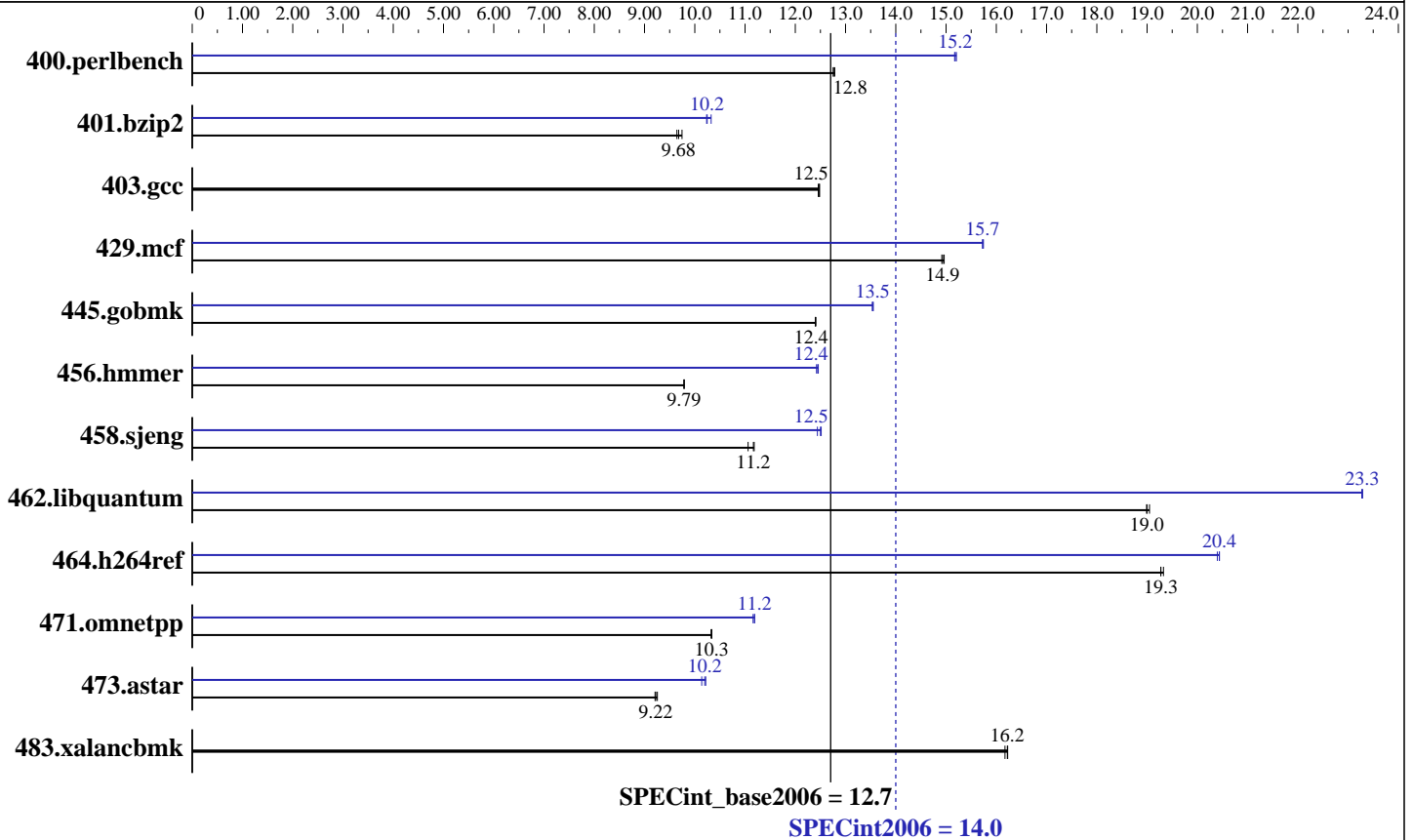
$SPECint\_base2006 =$ 12.7

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Bull SAS

Test date: Aug-2007
Hardware Availability: Mar-2007
Software Availability: May-2007

Benchmark	base	peak
400.perlbench	12.8	15.2
401.bzip2	9.68	10.2
403.gcc	12.5	
429.mcf	14.9	15.7
445.gobmk	12.4	13.5
456.hmmer	9.79	12.4
458.sjeng	11.2	12.5
462.libquantum	19.0	23.3
464.h264ref	19.3	20.4
471.omnetpp	10.3	11.2
473.astar	9.22	10.2
483.xalancbmk	16.2	

SPECint_base2006 = 12.7

SPECint2006 = 14.0

Hardware

CPU Name:	Intel Xeon E5320
CPU Characteristics:	1.86 GHz, 8 MB L2, 1066 MHz system bus
CPU MHz:	1860
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1 to 2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	8 MB I+D on chip per chip, 4 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	12 GB (12x1 GB) FB-DIMM PC2-4200F ECC CL4
Disk Subsystem:	1x147 GB SAS, 15000 RPM
Other Hardware:	None

Software

Operating System:	SUSE LINUX Enterprise Server 10 Kernel 2.6.16.21-0.8-smp for x86_64
Compiler:	Intel C++ Compiler for Linux32 and Linux64 version 10.0 Build 20070426 Package ID: l_cc_p_10.0.023
Auto Parallel:	No
File System:	ext2
System State:	Multi-user run level 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	SmartHeap library V8.1 Binutils 2.17.50.0.15

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	764	12.8	**766**	**12.8**	766	12.8	644	15.2	**643**	**15.2**	643	15.2
401.bzip2	**997**	**9.68**	990	9.75	1001	9.64	943	10.2	935	10.3	**942**	**10.2**
403.gcc	**645**	**12.5**	646	12.5	645	12.5	**645**	**12.5**	646	12.5	645	12.5
429.mcf	**611**	**14.9**	610	15.0	611	14.9	580	15.7	**580**	**15.7**	579	15.7
445.gobmk	**846**	**12.4**	846	12.4	845	12.4	775	13.5	**775**	**13.5**	774	13.6
456.hmmer	**953**	**9.79**	953	9.79	954	9.78	**750**	**12.4**	749	12.5	751	12.4
458.sjeng	1094	11.1	**1084**	**11.2**	1082	11.2	**968**	**12.5**	973	12.4	967	12.5
462.libquantum	1091	19.0	**1091**	**19.0**	1088	19.0	890	23.3	890	23.3	**890**	**23.3**
464.h264ref	1145	19.3	1148	19.3	**1148**	**19.3**	1085	20.4	**1083**	**20.4**	1083	20.4
471.omnetpp	**605**	**10.3**	605	10.3	605	10.3	**559**	**11.2**	559	11.2	560	11.2
473.astar	762	9.21	**761**	**9.22**	758	9.26	692	10.1	**688**	**10.2**	687	10.2
483.xalancbmk	425	16.2	**425**	**16.2**	427	16.2	425	16.2	**425**	**16.2**	427	16.2

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Operating System Notes

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

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer,
for peak, are compiled in 64-bit mode

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:
```
-fast
```

C++ benchmarks:
```
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/spec/cpu2006/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/cce/10.0.023/bin/icc
           -L/opt/intel/cce/10.0.023/lib
           -I/opt/intel/cce/10.0.023/include

456.hmmer: /opt/intel/cce/10.0.023/bin/icc
           -L/opt/intel/cce/10.0.023/lib
           -I/opt/intel/cce/10.0.023/include
```

C++ benchmarks:
```
icpc
```

Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LINUX_IA32
   401.bzip2: -DSPEC_CPU_LP64
   456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX
```

Peak Optimization Flags

C benchmarks:

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Peak Optimization Flags (Continued)

```
  400.perlbench: -prof_gen(pass 1) -prof_use(pass 2) -fast -ansi-alias
                 -prefetch

      401.bzip2: -prof_gen(pass 1) -prof_use(pass 2) -fast

        403.gcc: basepeak = yes

        429.mcf: -fast -prefetch

      445.gobmk: -prof_gen(pass 1) -prof_use(pass 2) -xT -O2 -ipo
                 -no-prec_div -ansi-alias

      456.hmmer: -prof_gen(pass 1) -prof_use(pass 2) -fast -unroll2
                 -ansi-alias

      458.sjeng: -prof_gen(pass 1) -prof_use(pass 2) -fast -unroll4

 462.libquantum: -prof_gen(pass 1) -prof_use(pass 2) -fast -unroll4 -Ob0
                 -prefetch -opt-streaming-stores always

     464.h264ref: Same as 456.hmmer
```

C++ benchmarks:

```
     471.omnetpp: -prof_gen(pass 1) -prof_use(pass 2) -xT -O3 -ipo
                  -no-prec_div -ansi-alias -Wl,-z,muldefs
                  -L/spec/cpu2006/lib -lsmartheap

        473.astar: Same as 471.omnetpp

    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/EM64T_Intel100_flags.20090714.01.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/EM64T_Intel100_flags.20090714.01.xml

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

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