SPEC® CINT2006 Result
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Bull SAS

NovaScale R422
(Intel Xeon processor X5365,3.00GHz)

SPECint®2006 = 24.0

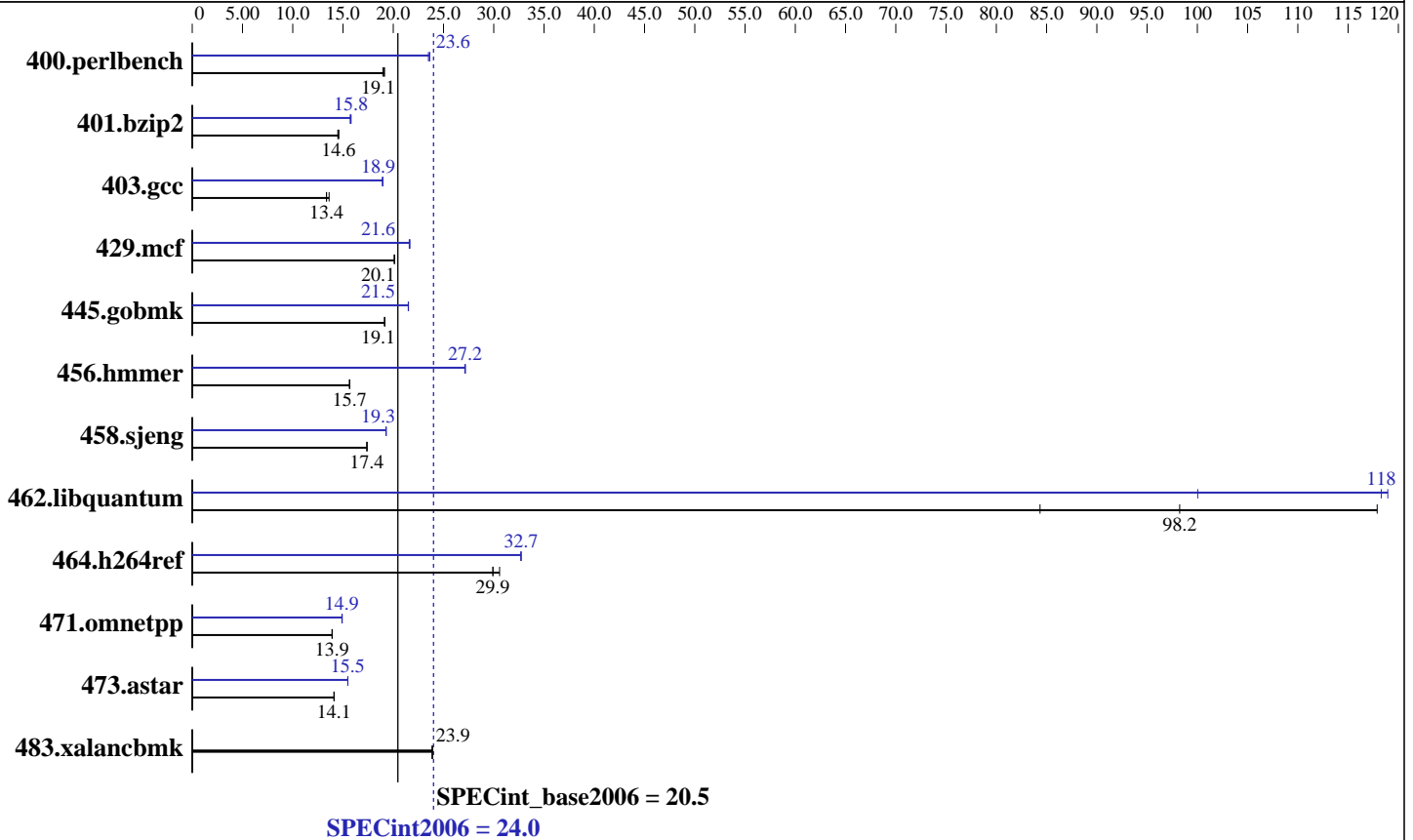SPECint_base2006 = 20.5

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

Test date: Oct-2007
Hardware Availability: Sep-2007
Software Availability: Nov-2007

Benchmark	base	peak
400.perlbench	19.1	23.6
401.bzip2	14.6	15.8
403.gcc	13.4	18.9
429.mcf	20.1	21.6
445.gobmk	19.1	21.5
456.hmmer	15.7	27.2
458.sjeng	17.4	19.3
462.libquantum	98.2	118
464.h264ref	29.9	32.7
471.omnetpp	13.9	14.9
473.astar	14.1	15.5
483.xalancbmk	23.9	

SPECint_base2006 = 20.5
SPECint2006 = 24.0

Hardware

CPU Name:	Intel Xeon X5365
CPU Characteristics:	3.00 GHz, 8 MB L2, 1333 MHz system bus
CPU MHz:	3000
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:	16 GB (8x2 GB) FB-DIMM PC2-5300F ECC CL5
Disk Subsystem:	1x147 GB SAS, 15000 RPM
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux AS Release 4 Update 4 Kernel 2.6.9-42.ELsmp for x86_64
Compiler:	Intel C++ Compiler for Linux32 and Linux64 version 10.1 Build 20070725
Auto Parallel:	Yes
File System:	ext3
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 Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
400.perlbench	515	19.0	511	19.1	**512**	**19.1**	416	23.5	**414**	**23.6**	414	23.6
401.bzip2	666	14.5	**663**	**14.6**	662	14.6	614	15.7	**611**	**15.8**	611	15.8
403.gcc	591	13.6	603	13.4	**603**	**13.4**	**425**	**18.9**	425	19.0	425	18.9
429.mcf	**453**	**20.1**	453	20.1	454	20.1	**422**	**21.6**	421	21.7	422	21.6
445.gobmk	548	19.1	**548**	**19.1**	548	19.2	488	21.5	**488**	**21.5**	488	21.5
456.hmmer	596	15.7	**596**	**15.7**	596	15.7	343	27.2	344	27.1	**344**	**27.2**
458.sjeng	696	17.4	696	17.4	**696**	**17.4**	627	19.3	627	19.3	**627**	**19.3**
462.libquantum	176	118	**211**	**98.2**	246	84.3	207	100	174	119	**175**	**118**
464.h264ref	724	30.6	**740**	**29.9**	740	29.9	**677**	**32.7**	677	32.7	676	32.7
471.omnetpp	**449**	**13.9**	449	13.9	448	13.9	420	14.9	419	14.9	**420**	**14.9**
473.astar	498	14.1	497	14.1	**497**	**14.1**	453	15.5	**453**	**15.5**	454	15.5
483.xalancbmk	**289**	**23.9**	289	23.9	289	23.9	**289**	**23.9**	289	23.9	289	23.9

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 -vec-guard-write -parallel -par-runtime-control
```

C++ benchmarks:
```
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap
```

Base Other Flags

C benchmarks:

        403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc
```

```
401.bzip2: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/bin/icc
           -L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/lib
           -I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/include
```

```
456.hmmer: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/bin/icc
           -L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/lib
           -I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/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 -prefetch
                 -auto-ilp32

         403.gcc: -fast -inline-calloc -opt-malloc-options=3

         429.mcf: -fast -prefetch

       445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo
                 -no-prec-div -ansi-alias

       456.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive
                 -auto-ilp32

       458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

  462.libquantum: -fast -unroll4 -Ob0 -prefetch
                 -opt-streaming-stores always -vec-guard-write
                 -opt-malloc-options=3 -parallel -par-runtime-control

      464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
                 -ansi-alias
```

C++ benchmarks:

```
      471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
                 -no-prec-div -ansi-alias -opt-ra-region-strategy=block
                 -Wl,-z,muldefs
                 -L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

        473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
                 -no-prec-div -ansi-alias -opt-ra-region-strategy=routine
                 -Wl,-z,muldefs
                 -L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

    483.xalancbmk: basepeak = yes
```

Peak Other Flags

C benchmarks:

```
         403.gcc: -Dalloca=_alloca
```

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The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/EM64T_Intel101_flags.20090714.00.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/EM64T_Intel101_flags.20090714.00.xml

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