



# SPEC<sup>®</sup> CINT2006 Result

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## Bull SAS

SPECint<sup>®</sup>2006 = 11.5

NovaScale 3045  
(1.6GHz/18MB Dual-Core Intel Itanium 2)

SPECint\_base2006 = 10.9

CPU2006 license: 20

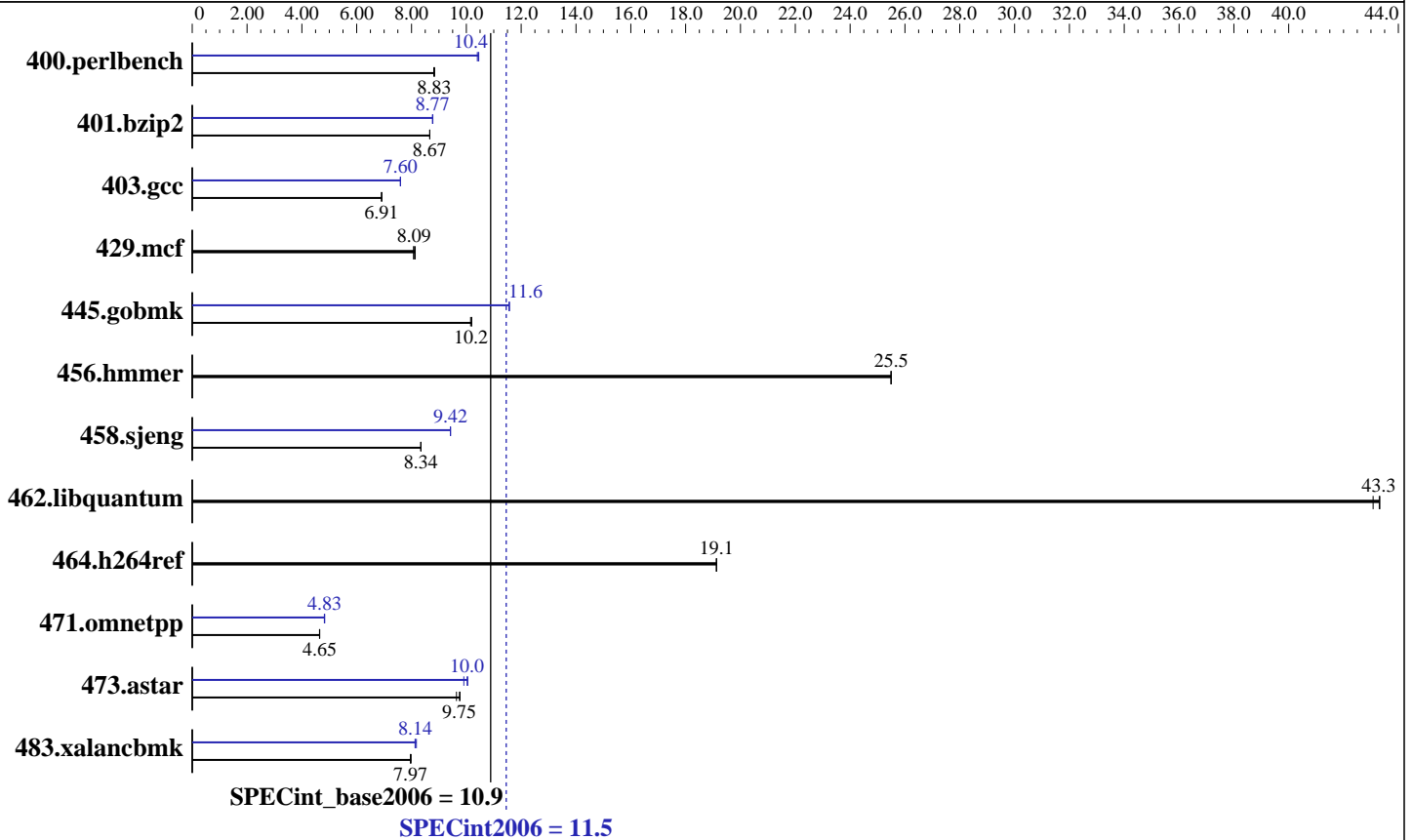
Test date: Mar-2007

Test sponsor: Bull SAS

Hardware Availability: Oct-2006

Tested by: Bull SAS

Software Availability: Nov-2006



### Hardware

CPU Name: Dual-Core Intel Itanium 2 9040  
 CPU Characteristics: 1.6GHz/18MB, 533MHz FSB  
 CPU MHz: 1600  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip  
 CPU(s) orderable: 1-4 chips  
 Primary Cache: 16 KB I + 16 KB D on chip per core  
 Secondary Cache: 1 MB I + 256 KB D on chip per core  
 L3 Cache: 9 MB I+D on chip per core  
 Other Cache: None  
 Memory: 64 GB (32x2GB DIMMs)  
 Disk Subsystem: 2x73 GB 15K RPM SAS  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux AS release 4 (Update 4)  
 Compiler: Intel C++ Compiler 9.1 for Linux (Build 20061105)  
 Auto Parallel: No  
 File System: ext3  
 System State: Multi-user  
 Base Pointers: 64-bit  
 Peak Pointers: 64-bit  
 Other Software: MicroQuill Smartheap 8.0



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	1105	8.84	1109	8.81	<b>1106</b>	<b>8.83</b>	935	10.5	<b>936</b>	<b>10.4</b>	939	10.4
401.bzip2	1114	8.67	1114	8.67	<b>1114</b>	<b>8.67</b>	1101	8.76	<b>1100</b>	<b>8.77</b>	1099	8.78
403.gcc	1165	6.91	<b>1165</b>	<b>6.91</b>	1166	6.91	1060	7.59	1059	7.60	<b>1060</b>	<b>7.60</b>
429.mcf	1121	8.14	1130	8.07	<b>1127</b>	<b>8.09</b>	1121	8.14	1130	8.07	<b>1127</b>	<b>8.09</b>
445.gobmk	<b>1029</b>	<b>10.2</b>	1033	10.2	1029	10.2	907	11.6	907	11.6	<b>907</b>	<b>11.6</b>
456.hmmer	366	25.5	<b>366</b>	<b>25.5</b>	366	25.5	366	25.5	<b>366</b>	<b>25.5</b>	366	25.5
458.sjeng	1450	8.34	<b>1450</b>	<b>8.34</b>	1451	8.34	1284	9.42	<b>1285</b>	<b>9.42</b>	1285	9.42
462.libquantum	<b>478</b>	<b>43.3</b>	481	43.1	478	43.3	<b>478</b>	<b>43.3</b>	481	43.1	478	43.3
464.h264ref	1157	19.1	1157	19.1	<b>1157</b>	<b>19.1</b>	1157	19.1	1157	19.1	<b>1157</b>	<b>19.1</b>
471.omnetpp	<b>1345</b>	<b>4.65</b>	1346	4.64	1344	4.65	1294	4.83	<b>1295</b>	<b>4.83</b>	1297	4.82
473.astar	719	9.77	728	9.64	<b>720</b>	<b>9.75</b>	<b>700</b>	<b>10.0</b>	708	9.91	698	10.1
483.xalancbmk	867	7.96	864	7.98	<b>866</b>	<b>7.97</b>	849	8.13	<b>848</b>	<b>8.14</b>	844	8.18

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

## Operating System Notes

stacksize set to unlimited prior to run

system was booted uniprocessor by setting "maxcpus=0"  
kernel parameter in elilo.conf

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_IA64  
401.bzip2: -DSPEC\_CPU\_LP64  
403.gcc: -DSPEC\_CPU\_LP64  
429.mcf: -DSPEC\_CPU\_LP64  
445.gobmk: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX

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## Base Portability Flags (Continued)

464.h264ref: -DSPEC\_CPU\_LP64  
471.omnetpp: -DSPEC\_CPU\_LP64  
473.astar: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-fast -IPF\_fp\_relaxed -ansi-alias  
C++ benchmarks:  
-fast -IPF\_fp\_relaxed -ansi-alias -Wl,-z,muldefs  
/opt/SmartHeap\_8/lib/libsmartheapC64.a  
/opt/SmartHeap\_8/lib/libsmartheap64.a

## Peak Compiler Invocation

C benchmarks:  
icc  
C++ benchmarks:  
icpc

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:  
400.perlbench: -prof\_gen(pass 1) -prof\_use(pass 2) -fast -IPF\_fp\_relaxed  
-ansi-alias  
401.bzip2: Same as 400.perlbench  
403.gcc: Same as 400.perlbench  
429.mcf: basepeak = yes  
445.gobmk: Same as 400.perlbench

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## Peak Optimization Flags (Continued)

456.hmmcr: basepeak = yes

458.sjeng: Same as 400.perlbench

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -prof\_gen(pass 1) -prof\_use(pass 2) -fast -IPF\_fp\_relaxed  
-ansi-alias -Wl,-z,muldefs  
/opt/SmartHeap\_8/lib/libsmartheapC64.a  
/opt/SmartHeap\_8/lib/libsmartheap64.a

473.astar: -prof\_gen(pass 1) -prof\_use(pass 2) -fast -IPF\_fp\_relaxed  
-ansi-alias -inline-factor=150 -Wl,-z,muldefs  
/opt/SmartHeap\_8/lib/libsmartheapC64.a  
/opt/SmartHeap\_8/lib/libsmartheap64.a

483.xalancbmk: Same as 471.omnetpp

The flags file that was used to format this result can be browsed at

[http://www.spec.org/cpu2006/flags/IPF\\_intel91\\_flags.html](http://www.spec.org/cpu2006/flags/IPF_intel91_flags.html)

You can also download the XML flags source by saving the following link:

[http://www.spec.org/cpu2006/flags/IPF\\_intel91\\_flags.xml](http://www.spec.org/cpu2006/flags/IPF_intel91_flags.xml)

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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