SPEC® CINT2006 Result
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Fujitsu

PRIMERGY RX300 S5, Intel Xeon X5570, 2.93 GHz

$SPECint^®2006 =$ 36.1

$SPECint\_base2006 =$ 32.1

CPU2006 license: 19	**Test date:** Apr-2009
Test sponsor: Fujitsu	**Hardware Availability:** Apr-2009
Tested by: Fujitsu	**Software Availability:** Feb-2009

Results bar chart, scale 0 to 315:

- **400.perlbench** 30.4 / 24.3
- **401.bzip2** 20.0 / 17.7
- **403.gcc** 29.8 / 26.7
- **429.mcf** 47.5 / 46.5
- **445.gobmk** 26.4 / 22.8
- **456.hmmer** 31.9 / 23.2
- **458.sjeng** 26.9 / 24.8
- **462.libquantum** 313
- **464.h264ref** 40.9 / 36.3
- **471.omnetpp** 26.1 / 23.2
- **473.astar** 20.7 / 18.0
- **483.xalancbmk** 36.0

SPECint_base2006 = 32.1

SPECint2006 = 36.1

Hardware

CPU Name:	Intel Xeon X5570
CPU Characteristics:	Intel Turbo Boost Technology up to 3.33 GHz
CPU MHz:	2933
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 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:	8 MB I+D on chip per chip
Other Cache:	None
Memory:	24 GB (6x4 GB PC3-10600R, 2 rank, CL9-9-9, ECC)
Disk Subsystem:	1 x SATA, 250 GB, 7200 RPM
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP2, Kernel 2.6.16.60-0.21-smp
Compiler:	Intel C++ Compiler 11.0 for Linux Build 20090131 Package ID: l_cproc_p_11.0.080
Auto Parallel:	Yes
File System:	ext3
System State:	Multi-User Run Level 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V8.1 Binutils 2.18.50.0.7.20080502

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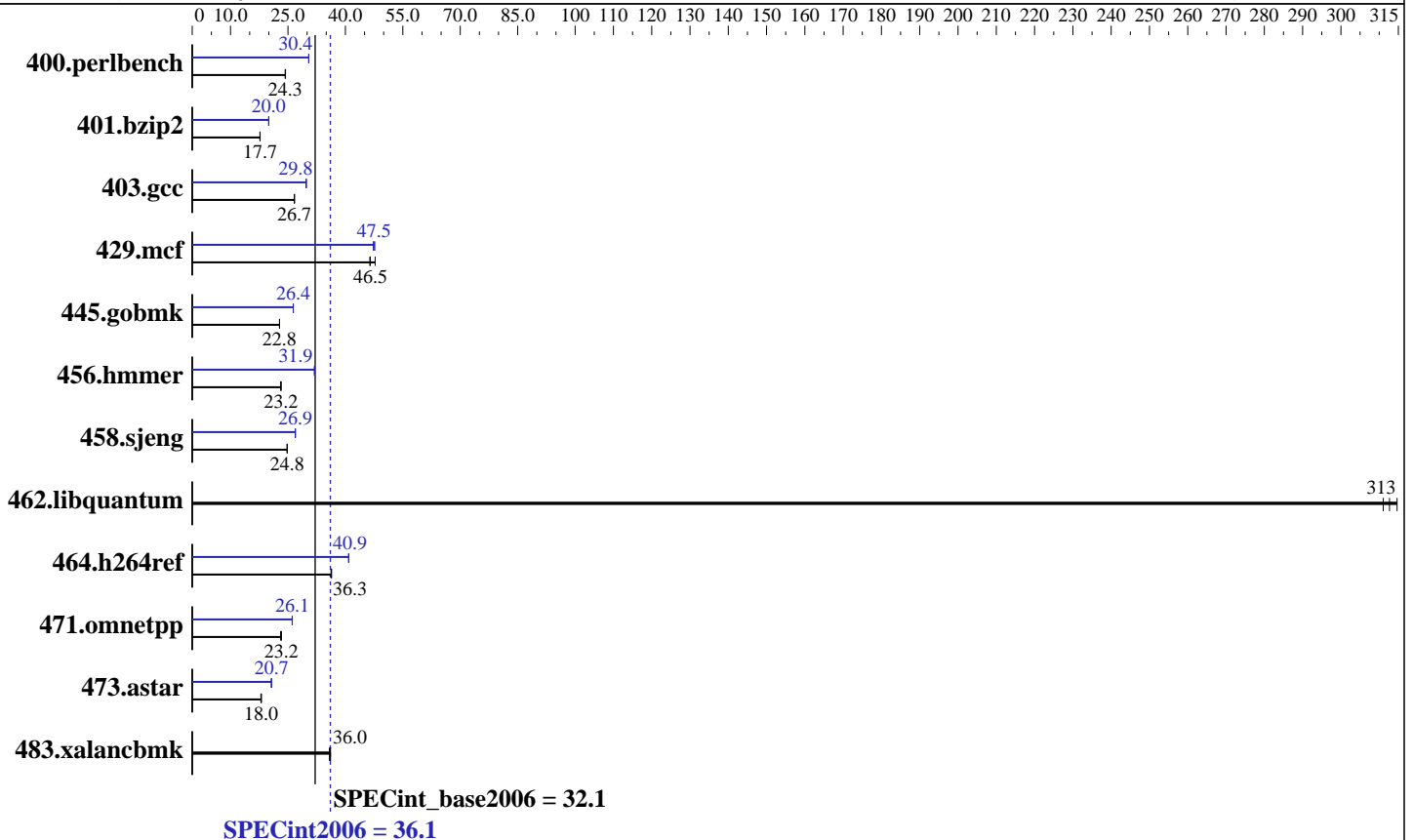|	
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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	401	24.4	**402**	**24.3**	402	24.3	**321**	**30.4**	321	30.5	321	30.4
401.bzip2	546	17.7	**545**	**17.7**	544	17.7	482	20.0	**483**	**20.0**	483	20.0
403.gcc	301	26.7	302	26.6	**302**	**26.7**	270	29.8	271	29.7	**270**	**29.8**
429.mcf	197	46.4	191	47.8	**196**	**46.5**	191	47.7	**192**	**47.5**	193	47.3
445.gobmk	**460**	**22.8**	460	22.8	460	22.8	398	26.4	**397**	**26.4**	397	26.4
456.hmmer	403	23.2	403	23.2	**403**	**23.2**	292	32.0	**292**	**31.9**	292	31.9
458.sjeng	**487**	**24.8**	489	24.7	487	24.8	450	26.9	**449**	**26.9**	449	26.9
462.libquantum	66.6	311	**66.3**	**313**	65.8	315	66.6	311	**66.3**	**313**	65.8	315
464.h264ref	608	36.4	**610**	**36.3**	610	36.3	542	40.8	541	40.9	**542**	**40.9**
471.omnetpp	271	23.1	269	23.3	**269**	**23.2**	239	26.1	240	26.1	**239**	**26.1**
473.astar	391	17.9	**389**	**18.0**	389	18.0	**339**	**20.7**	338	20.7	340	20.6
483.xalancbmk	**192**	**36.0**	191	36.1	193	35.8	**192**	**36.0**	191	36.1	193	35.8

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

General Notes

OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
This result was measured on the PRIMERGY TX300 S5. The PRIMERGY TX300 S5
and the PRIMERGY RX300 S5 are electronically equivalent.

For information about Fujitsu please visit: http://www.fujitsu.com

Base Compiler Invocation

C benchmarks:
    icc

C++ benchmarks:
    icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32

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Base Portability Flags (Continued)

```
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX
```

Base Optimization Flags

C benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel
-par-runtime-control -opt-prefetch
```

C++ benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/spec/cpu2006.1.1/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/Compiler/11.0/080/bin/intel64/icc
```

```
456.hmmer: /opt/intel/Compiler/11.0/080/bin/intel64/icc
```

```
458.sjeng: /opt/intel/Compiler/11.0/080/bin/intel64/icc
```

C++ benchmarks (except as noted below):
```
icpc
```

```
473.astar: /opt/intel/Compiler/11.0/080/bin/intel64/icpc
```

Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
```

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Peak Portability Flags (Continued)

```
462.libquantum: -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 -opt-prefetch

    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) -auto-ilp32 -opt-prefetch -ansi-alias

      403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static -inline-calloc
               -opt-malloc-options=3

      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: basepeak = yes

   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/spec/cpu2006.1.1/lib -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 -auto-ilp32
               -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap64
```

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Peak Optimization Flags (Continued)

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-ic11.0-int-linux64-revA.20091013.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20091013.xml

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

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