SPEC® CINT2006 Result
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Supermicro

SuperWorkstation 7047GR-TRF (X9DRG-QF, Intel Xeon E5-2630L)

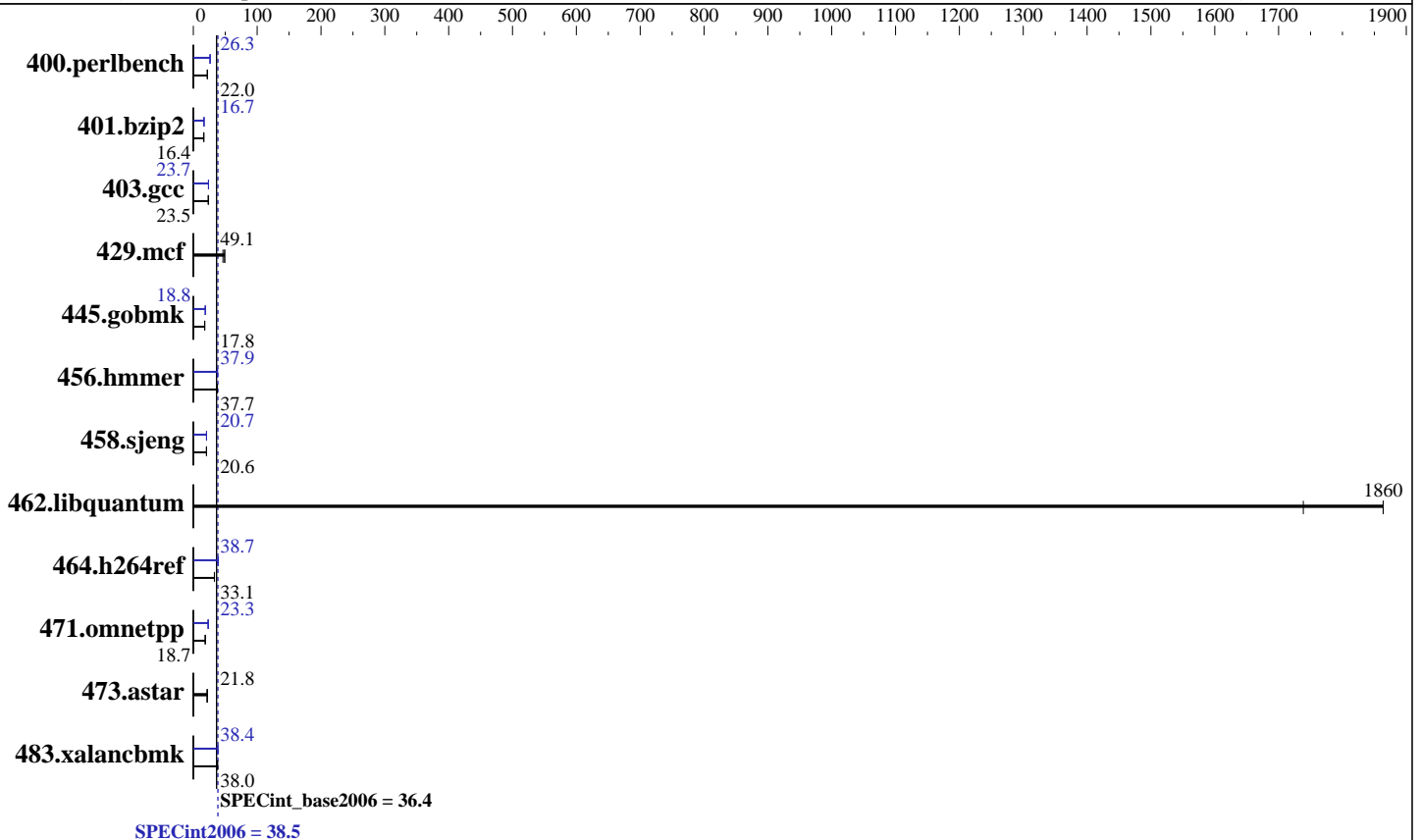SPECint®2006 = 38.5

SPECint_base2006 = 36.4

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Apr-2012
Hardware Availability: Mar-2012
Software Availability: Dec-2011

400.perlbench	26.3	22.0
401.bzip2	16.7	16.4
403.gcc	23.7	23.5
429.mcf	49.1	
445.gobmk	18.8	17.8
456.hmmer	37.9	37.7
458.sjeng	20.7	20.6
462.libquantum	1860	
464.h264ref	38.7	33.1
471.omnetpp	23.3	18.7
473.astar	21.8	
483.xalancbmk	38.4	38.0

SPECint_base2006 = 36.4

SPECint2006 = 38.5

Hardware

CPU Name: Intel Xeon E5-2630L
CPU Characteristics: Intel Turbo Boost Technology up to 2.50 GHz
CPU MHz: 2000
FPU: Integrated
CPU(s) enabled: 12 cores, 2 chips, 6 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: 15 MB I+D on chip per chip
Other Cache: None
Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC, running at 1333 MHz and CL9)
Disk Subsystem: 1 x 1 TB SATA II, 7200 RPM
Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server Release 6.2, Kernel 2.6.32-220.el6.x86_64
Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux
Auto Parallel: Yes
File System: ext4
System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V9.01

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	**444**	**22.0**	442	22.1	446	21.9	**372**	**26.3**	371	26.4	373	26.2
401.bzip2	**590**	**16.4**	589	16.4	591	16.3	576	16.8	**576**	**16.7**	577	16.7
403.gcc	**342**	**23.5**	342	23.5	342	23.5	339	23.7	**339**	**23.7**	339	23.8
429.mcf	197	46.4	185	49.2	**186**	**49.1**	197	46.4	185	49.2	**186**	**49.1**
445.gobmk	587	17.9	**589**	**17.8**	590	17.8	**559**	**18.8**	559	18.8	559	18.8
456.hmmer	248	37.7	247	37.7	**248**	**37.7**	246	37.9	**246**	**37.9**	247	37.8
458.sjeng	586	20.7	**586**	**20.6**	588	20.6	**584**	**20.7**	584	20.7	588	20.6
462.libquantum	**11.1**	**1860**	11.1	1860	11.9	1740	**11.1**	**1860**	11.1	1860	11.9	1740
464.h264ref	671	33.0	**669**	**33.1**	668	33.1	573	38.7	568	38.9	**572**	**38.7**
471.omnetpp	**334**	**18.7**	334	18.7	334	18.7	268	23.3	**268**	**23.3**	270	23.2
473.astar	322	21.8	**322**	**21.8**	324	21.7	322	21.8	**322**	**21.8**	324	21.7
483.xalancbmk	**182**	**38.0**	181	38.0	184	37.6	**180**	**38.4**	180	38.4	180	38.2

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

Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
```

General Notes

```
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64"
OMP_NUM_THREADS = "12"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RHEL5.5
```

Base Compiler Invocation

C benchmarks:
```
icc -m64
```

C++ benchmarks:
```
icpc -m64
```

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Base Portability Flags

```
      400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
          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
         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:
```
     -xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32
```

C++ benchmarks:
```
     -xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -Wl,-z,muldefs
     -L/smartheap -lsmartheap64
```

Base Other Flags

C benchmarks:

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

Peak Compiler Invocation

C benchmarks (except as noted below):
```
     icc  -m64
```

```
   400.perlbench: icc -m32
```

```
     445.gobmk: icc -m32
```

```
   464.h264ref: icc -m32
```

C++ benchmarks (except as noted below):
```
     icpc -m32
```

```
     473.astar: icpc -m64
```

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Test sponsor:	Supermicro	**Hardware Availability:**	Mar-2012
Tested by:	Supermicro	**Software Availability:**	Dec-2011

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
401.bzip2: `-DSPEC_CPU_LP64`
403.gcc: `-DSPEC_CPU_LP64`
429.mcf: `-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: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
`-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch`
`-ansi-alias`

401.bzip2: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
`-no-prec-div -prof-use(pass 2) -auto-ilp32 -opt-prefetch`
`-ansi-alias`

403.gcc: `-xAVX -ipo -O3 -no-prec-div -inline-calloc`
`-opt-malloc-options=3 -auto-ilp32`

429.mcf: basepeak = yes

445.gobmk: `-xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)`
`-ansi-alias`

456.hmmer: `-xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilp32`
`-ansi-alias`

458.sjeng: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
`-no-prec-div(pass 2) -prof-use(pass 2) -unroll4`

462.libquantum: basepeak = yes

464.h264ref: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
`-no-prec-div(pass 2) -prof-use(pass 2) -unroll2`
`-ansi-alias`

C++ benchmarks:

471.omnetpp: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
`-no-prec-div(pass 2) -prof-use(pass 2)`
`-opt-ra-region-strategy=block            -ansi-alias`
`-Wl,-z,muldefs -L/smartheap -lsmartheap`

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Peak Optimization Flags (Continued)

473.astar: basepeak = yes

483.xalancbmk: `-xAVX -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias -Wl,-z,muldefs -L/smartheap -lsmartheap`

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-ic12.1-official-linux64.20111122.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml

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