SPEC® CINT2006 Result
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Fujitsu

PRIMERGY BX2560 M1, Intel Xeon E5-2650L v3, 1.8 GHz

SPECint®2006 = **48.5**

SPECint_base2006 = **46.2**

CPU2006 license:	19	**Test date:**	Jan-2015
Test sponsor:	Fujitsu	**Hardware Availability:**	Sep-2014
Tested by:	Fujitsu	**Software Availability:**	Nov-2013

0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000 4200 4400 4600 4900

400.perlbench 33.4 / 28.3
401.bzip2 18.1 / 18.0
403.gcc 27.8 / 27.3
429.mcf 50.3 / 49.6
445.gobmk 20.8 / 18.7
456.hmmer 49.5
458.sjeng 25.1 / 24.8
462.libquantum 4880
464.h264ref 34.3
471.omnetpp 38.1 / 30.0
473.astar 24.4 / 24.2
483.xalancbmk 49.7 / 49.3

SPECint_base2006 = 46.2

SPECint2006 = 48.5

Hardware

CPU Name:	Intel Xeon E5-2650L v3
CPU Characteristics:	Intel Turbo Boost Technology up to 2.50 GHz
CPU MHz:	1800
FPU:	Integrated
CPU(s) enabled:	24 cores, 2 chips, 12 cores/chip, 2 threads/core
CPU(s) orderable:	1,2 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	30 MB I+D on chip per chip
Other Cache:	None
Memory:	256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)
Disk Subsystem:	1 x SATA, 500 GB, 7200 RPM
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.5 (Santiago) 2.6.32-431.23.3.el6.x86_64
Compiler:	C/C++: Version 14.0.0.080 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 V10.0

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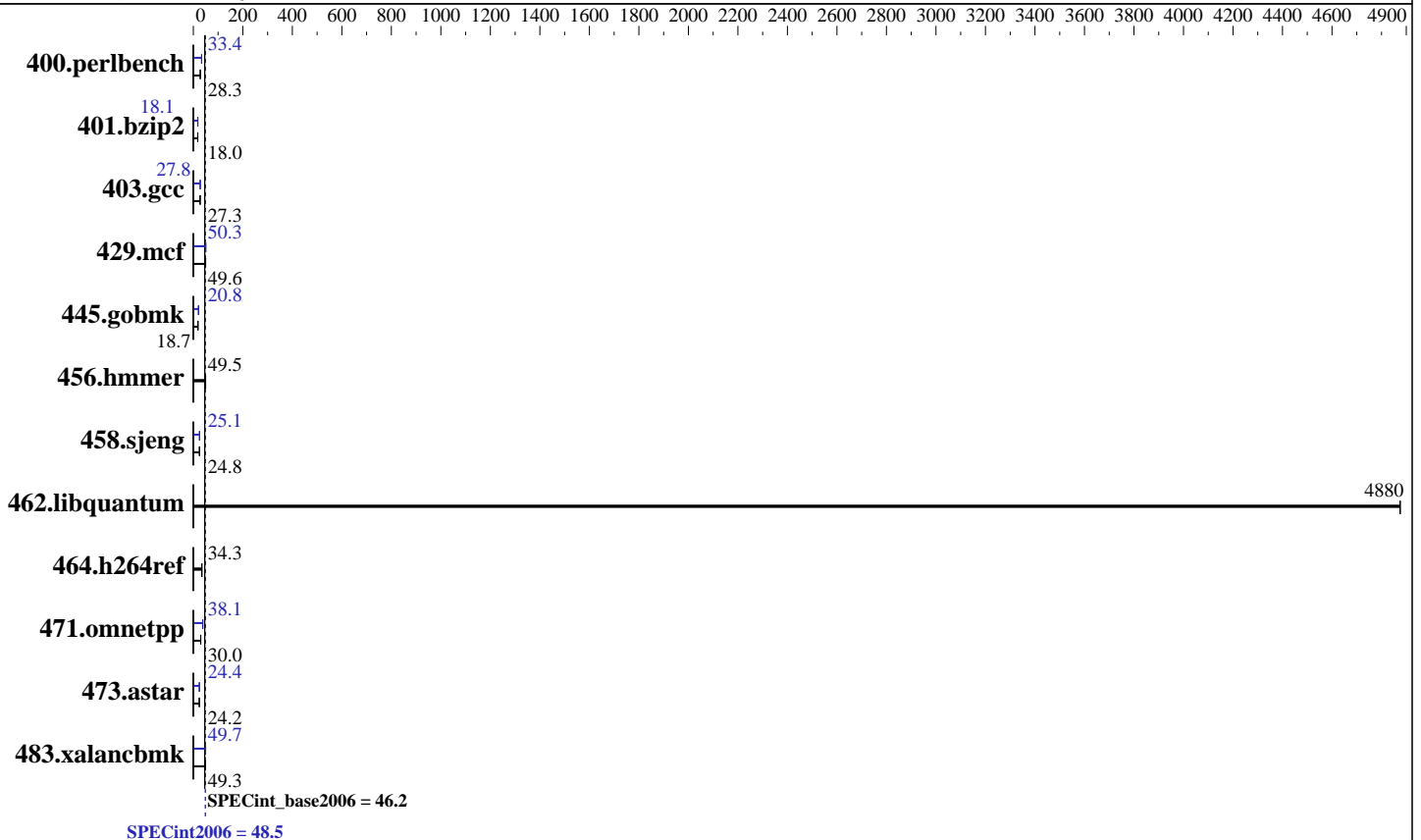SPECint2006 = 48.5

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	**345**	**28.3**	346	28.2	345	28.3	292	33.4	292	33.4	**292**	**33.4**
401.bzip2	537	18.0	536	18.0	**536**	**18.0**	532	18.1	532	18.1	**532**	**18.1**
403.gcc	295	27.3	**295**	**27.3**	294	27.4	289	27.8	**290**	**27.8**	290	27.7
429.mcf	**184**	**49.6**	182	50.0	187	48.9	181	50.3	**181**	**50.3**	183	49.7
445.gobmk	562	18.7	**562**	**18.7**	563	18.6	504	20.8	504	20.8	**504**	**20.8**
456.hmmer	**188**	**49.5**	190	49.1	187	49.9	**188**	**49.5**	190	49.1	187	49.9
458.sjeng	488	24.8	**488**	**24.8**	487	24.8	483	25.1	**483**	**25.1**	483	25.1
462.libquantum	4.25	4880	4.25	4870	**4.25**	**4880**	4.25	4880	4.25	4870	**4.25**	**4880**
464.h264ref	**645**	**34.3**	643	34.4	646	34.3	**645**	**34.3**	643	34.4	646	34.3
471.omnetpp	208	30.0	**208**	**30.0**	210	29.8	163	38.2	164	38.0	**164**	**38.1**
473.astar	**290**	**24.2**	290	24.2	292	24.1	288	24.4	**288**	**24.4**	287	24.4
483.xalancbmk	140	49.3	140	49.3	**140**	**49.3**	139	49.7	**139**	**49.7**	139	49.6

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

Submit Notes

The config file option 'submit' was used.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

```
    BIOS configuration:
    Energy Performance = Performance
    Utilization Profile = Unbalanced
    QPI snoop mode: Early Snoop
        COD Enable = Disabled, Early Snoop = Enabled
    CPU C1E Support = Disabled
```

General Notes

```
    Environment variables set by runspec before the start of the run:
    KMP_AFFINITY = "granularity=fine,compact,1,0"
    LD_LIBRARY_PATH = "/home/SPECcpu2006/libs/32:/home/SPECcpu2006/libs/64:/home/SPECcpu2006/sh"
    OMP_NUM_THREADS = "24"

     Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
     memory using RedHat EL 6.4
     Transparent Huge Pages enabled with:
     echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
```

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General Notes (Continued)

```
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

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

Base Compiler Invocation

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

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

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:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32
```

C++ benchmarks:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh -lsmartheap64
```

Base Other Flags

C benchmarks:

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

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Peak Compiler Invocation

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

    400.perlbench: `icc -m32`

    445.gobmk: `icc -m32`

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

    473.astar: `icpc -m64`

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`
        464.h264ref: `-DSPEC_CPU_LP64`
        473.astar: `-DSPEC_CPU_LP64`
        483.xalancbmk: `-DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

        400.perlbench: `-xCORE-AVX2(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: `-xCORE-AVX2(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: `-xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc`
                `-opt-malloc-options=3 -auto-ilp32`

        429.mcf: `-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel`
                `-opt-prefetch -auto-p32`

        445.gobmk: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)`
                `-ansi-alias`

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Peak Optimization Flags (Continued)

456.hmmer: basepeak = yes

458.sjeng: -xCORE-AVX2(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: basepeak = yes

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(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/sh -lsmartheap

473.astar: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-auto-p32 -Wl,-z,muldefs -L/sh -lsmartheap64

483.xalancbmk: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64-revB.html
http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64-revB.xml
http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.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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