SPEC® CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

BladeSymphony BS2000 (Intel Xeon X5690)

$SPECfp^{®}2006 =$ 62.1
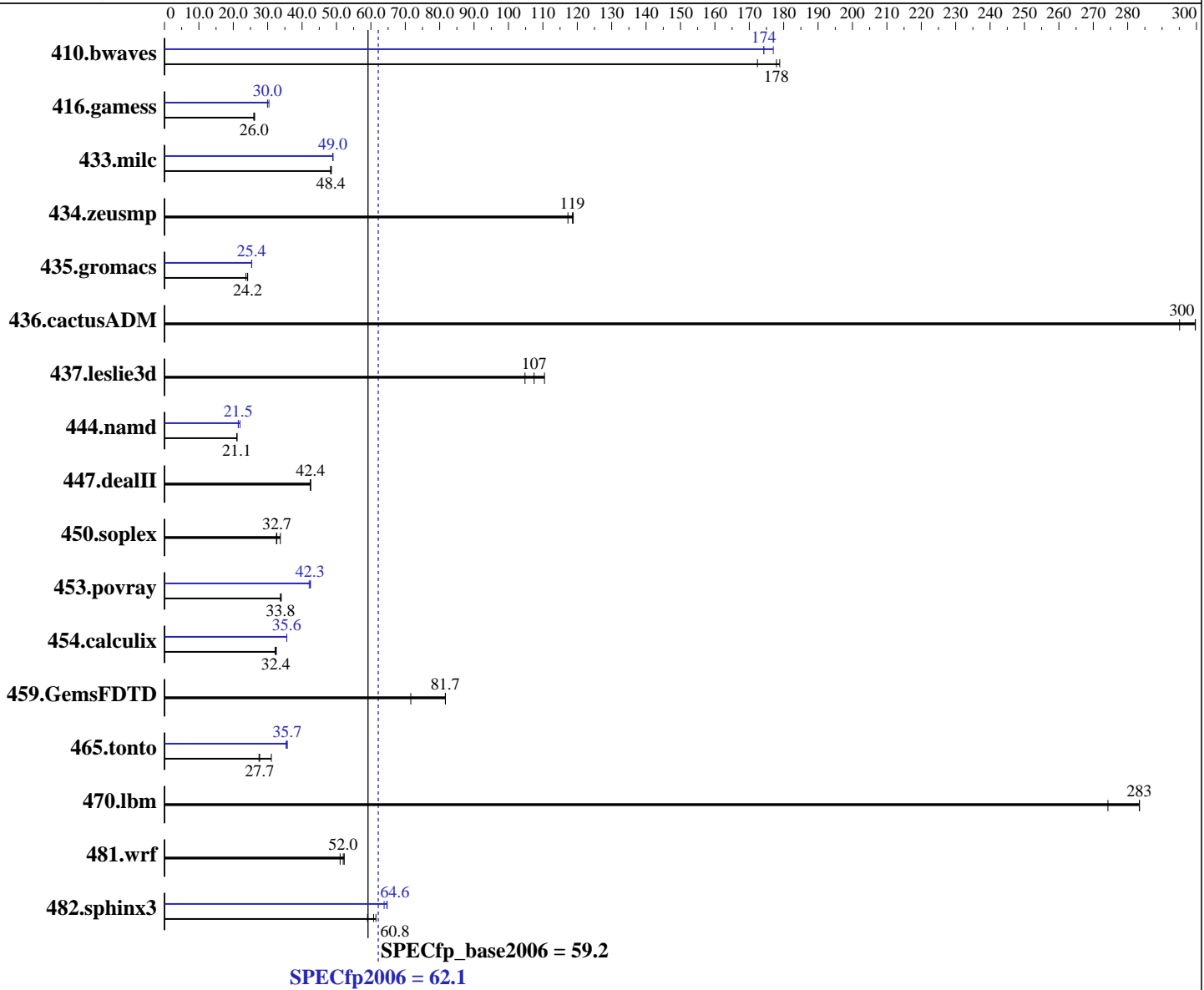
$SPECfp\_base2006 =$ 59.2

CPU2006 license: 35
Test sponsor: HITACHI
Tested by: HITACHI

Test date: May-2011
Hardware Availability: Feb-2011
Software Availability: Jan-2011

Benchmark	Value
410.bwaves	174 / 178
416.gamess	30.0 / 26.0
433.milc	49.0 / 48.4
434.zeusmp	119
435.gromacs	25.4 / 24.2
436.cactusADM	300
437.leslie3d	107
444.namd	21.5 / 21.1
447.dealII	42.4
450.soplex	32.7
453.povray	42.3 / 33.8
454.calculix	35.6 / 32.4
459.GemsFDTD	81.7
465.tonto	35.7 / 27.7
470.lbm	283
481.wrf	52.0
482.sphinx3	64.6 / 60.8

SPECfp_base2006 = 59.2
SPECfp2006 = 62.1

Hardware

CPU Name:	Intel Xeon X5690
CPU Characteristics:	Intel Turbo Boost Technology up to 3.73 GHz
CPU MHz:	3466
FPU:	Integrated
CPU(s) enabled:	12 cores, 2 chips, 6 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

Continued on next page

Software

Operating System:	Red Hat Enterprise Linux Server release 5.4.3, Advanced Platform, Kernel 2.6.18-164.9.1.el5 on an x86_64
Compiler:	Intel C++ Compiler XE for Linux Version 12.0.3.174 Build 20110309 Intel Fortran Compiler XE for Linux Version 12.0.3.174 Build 20110309
Auto Parallel:	Yes
File System:	ext3

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

BladeSymphony BS2000 (Intel Xeon X5690)

SPECfp2006 =	62.1
SPECfp_base2006 =	59.2

CPU2006 license: 35
Test sponsor: HITACHI
Tested by: HITACHI

Test date: May-2011
Hardware Availability: Feb-2011
Software Availability: Jan-2011

L3 Cache:	12 MB I+D on chip per chip
Other Cache:	None
Memory:	48 GB (6 x 8 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem:	2 x 146 GB 10000 rpm SAS RAID1 configuration
Other Hardware:	None

System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	32/64-bit
Other Software:	None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	78.8	172	76.0	179	**76.4**	**178**	**78.0**	**174**	76.8	177	78.0	174
416.gamess	**753**	**26.0**	747	26.2	753	26.0	645	30.4	**653**	**30.0**	654	29.9
433.milc	189	48.5	190	48.3	**190**	**48.4**	188	48.9	**187**	**49.0**	187	49.0
434.zeusmp	77.6	117	76.6	119	**76.7**	**119**	77.6	117	76.6	119	**76.7**	**119**
435.gromacs	295	24.2	301	23.7	**296**	**24.2**	281	25.4	**282**	**25.4**	282	25.3
436.cactusADM	40.5	295	39.9	300	**39.9**	**300**	40.5	295	39.9	300	**39.9**	**300**
437.leslie3d	85.1	110	89.7	105	**87.5**	**107**	85.1	110	89.7	105	**87.5**	**107**
444.namd	**381**	**21.1**	381	21.1	381	21.0	**374**	**21.5**	365	22.0	374	21.4
447.dealII	270	42.4	**270**	**42.4**	269	42.5	270	42.4	**270**	**42.4**	269	42.5
450.soplex	248	33.7	**255**	**32.7**	256	32.5	248	33.7	**255**	**32.7**	256	32.5
453.povray	158	33.8	**158**	**33.8**	157	33.9	126	42.1	125	42.4	**126**	**42.3**
454.calculix	257	32.1	**255**	**32.4**	254	32.5	**232**	**35.6**	232	35.6	232	35.6
459.GemsFDTD	130	81.7	148	71.6	**130**	**81.7**	130	81.7	148	71.6	**130**	**81.7**
465.tonto	317	31.1	**356**	**27.7**	358	27.5	**276**	**35.7**	279	35.3	276	35.7
470.lbm	**48.5**	**283**	48.5	283	50.1	274	**48.5**	**283**	48.5	283	50.1	274
481.wrf	214	52.3	**215**	**52.0**	219	51.1	214	52.3	**215**	**52.0**	219	51.1
482.sphinx3	317	61.5	330	59.0	**321**	**60.8**	301	64.7	**302**	**64.6**	305	63.9

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
    Hugepages was enabled with the following:
    'nodev   /mnt/hugepages   hugetlbfs   defaults   0 0' added to /etc/fstab
    echo 900 > /proc/sys/vm/nr_hugepages
    export HUGETLB_MORECORE=yes
    export LD_PRELOAD=/usr/lib64/libhugetlbfs.so

Platform Notes

    BIOS Settings:
    Intel HT Technology = Disabled
    Data Reuse Optimization = Disabled

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

BladeSymphony BS2000 (Intel Xeon X5690)

$SPECfp2006 = $ 62.1

$SPECfp_base2006 = $ 59.2

CPU2006 license: 35
Test sponsor: HITACHI
Tested by: HITACHI

Test date: May-2011
Hardware Availability: Feb-2011
Software Availability: Jan-2011

Base Compiler Invocation

C benchmarks:
    icc -m64

C++ benchmarks:
    icpc -m64

Fortran benchmarks:
    ifort -m64

Benchmarks using both Fortran and C:
    icc -m64 ifort -m64

Base Portability Flags

        410.bwaves: -DSPEC_CPU_LP64
        416.gamess: -DSPEC_CPU_LP64
          433.milc: -DSPEC_CPU_LP64
        434.zeusmp: -DSPEC_CPU_LP64
       435.gromacs: -DSPEC_CPU_LP64 -nofor_main
      436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
       437.leslie3d: -DSPEC_CPU_LP64
          444.namd: -DSPEC_CPU_LP64
         447.dealII: -DSPEC_CPU_LP64
        450.soplex: -DSPEC_CPU_LP64
        453.povray: -DSPEC_CPU_LP64
       454.calculix: -DSPEC_CPU_LP64 -nofor_main
       459.GemsFDTD: -DSPEC_CPU_LP64
         465.tonto: -DSPEC_CPU_LP64
          470.lbm: -DSPEC_CPU_LP64
           481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
       482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
    -xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
    -ansi-alias

C++ benchmarks:
    -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

Fortran benchmarks:
    -xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:
    -xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
    -ansi-alias

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

HITACHI

BladeSymphony BS2000 (Intel Xeon X5690)

$SPECfp2006 =$ 62.1

$SPECfp\_base2006 =$ 59.2

Peak Compiler Invocation

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

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

Fortran benchmarks:
```
ifort -m64
```

Benchmarks using both Fortran and C:
```
icc -m64 ifort -m64
```

Peak Portability Flags

```
Same as Base Portability Flags
```

Peak Optimization Flags

C benchmarks:

433.milc: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
`-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32`
`-ansi-alias`

470.lbm: `basepeak = yes`

482.sphinx3: `-xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -ansi-alias`
`-parallel`

C++ benchmarks:

444.namd: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
`-no-prec-div(pass 2) -prof-use(pass 2) -fno-alias`
`-auto-ilp32`

447.dealII: `basepeak = yes`

450.soplex: `basepeak = yes`

453.povray: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
`-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias`
`-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

Fortran benchmarks:

HITACHI

BladeSymphony BS2000 (Intel Xeon X5690)

$SPECfp2006 =$ 62.1

$SPECfp\_base2006 =$ 59.2

CPU2006 license: 35		**Test date:**	May-2011
Test sponsor: HITACHI		**Hardware Availability:**	Feb-2011
Tested by: HITACHI		**Software Availability:**	Jan-2011

Peak Optimization Flags (Continued)

```
410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -parallel
            -static

416.gamess: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
            -no-prec-div(pass 2) -prof-use(pass 2) -unroll2
            -inline-level=0 -scalar-rep- -static

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
           -no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc
           -opt-malloc-options=3 -auto -unroll4
           -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT
```

Benchmarks using both Fortran and C:

```
435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
             -no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32
             -ansi-alias

436.cactusADM: basepeak = yes

454.calculix: -xSSE4.2 -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

481.wrf: basepeak = yes
```

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.html
http://www.spec.org/cpu2006/flags/PlatformHitachi.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml
http://www.spec.org/cpu2006/flags/PlatformHitachi.xml

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

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 18:01:21 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 7 June 2011.