SPEC® CFP2006 Result

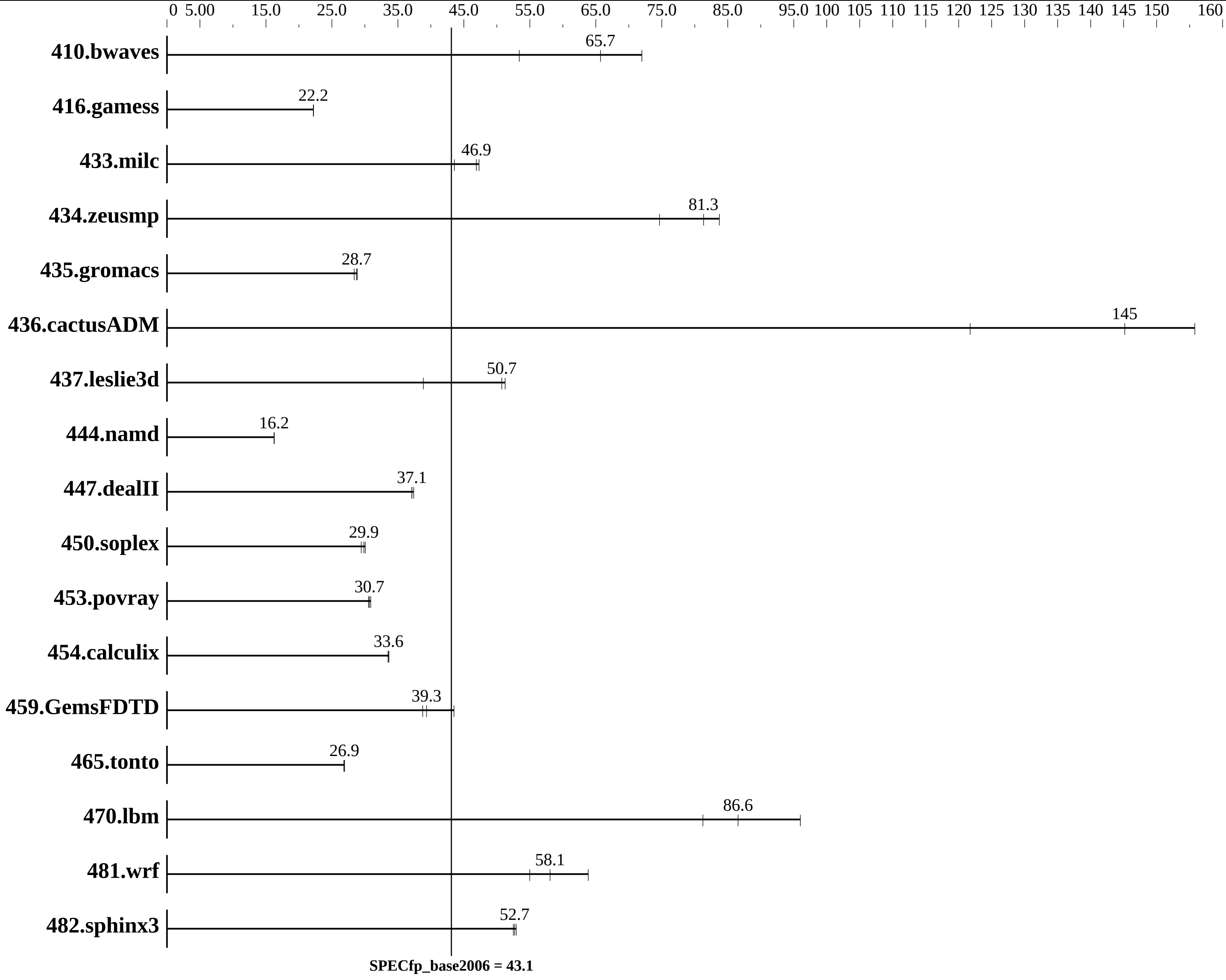
Hewlett-Packard Company

ProLiant DL380e Gen8
(1.90 GHz, Intel Xeon E5-2420)

SPECfp®2006 = Not Run

SPECfp_base2006 = 43.1

CPU2006 license: 3		**Test date:**	Sep-2013
Test sponsor:	Hewlett-Packard Company	**Hardware Availability:**	Jun-2012
Tested by:	Hewlett-Packard Company	**Software Availability:**	Sep-2013



Hardware

CPU Name:	Intel Xeon E5-2420
CPU Characteristics:	Intel Turbo Boost Technology up to 2.40 GHz
CPU MHz:	1900
FPU:	Integrated
CPU(s) enabled:	6 cores, 1 chip, 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

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Software

Operating System:	Red Hat Enterprise Linux Server release 6.4, (Santiago) 2.6.32-358.el6.x86_64
Compiler:	C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux; Fortran: Version 14.0.0.080 of Intel Fortran Studio XE for Linux
Auto Parallel:	Yes
File System:	ext4

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L3 Cache: 15 MB I+D on chip per chip
Other Cache: None
Memory: 16 GB (4 x 4 GB 1Rx4 PC3-12800R-11, ECC, running at 1333 MHz and CL9)
Disk Subsystem: 2 x 300 GB SAS, RAID 0
Other Hardware: None

System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: Not Applicable
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	254	53.4	**207**	**65.7**	189	72.0						
416.gamess	883	22.2	881	22.2	**882**	**22.2**						
433.milc	211	43.6	**196**	**46.9**	194	47.3						
434.zeusmp	122	74.7	**112**	**81.3**	109	83.7						
435.gromacs	248	28.8	**248**	**28.7**	252	28.4						
436.cactusADM	98.2	122	**82.3**	**145**	76.7	156						
437.leslie3d	242	38.9	**185**	**50.7**	183	51.3						
444.namd	494	16.2	**494**	**16.2**	494	16.2						
447.dealII	**308**	**37.1**	308	37.1	306	37.4						
450.soplex	283	29.4	**279**	**29.9**	277	30.1						
453.povray	**173**	**30.7**	172	30.9	174	30.5						
454.calculix	**245**	**33.6**	245	33.6	246	33.5						
459.GemsFDTD	274	38.8	**270**	**39.3**	244	43.5						
465.tonto	366	26.9	367	26.8	**366**	**26.9**						
470.lbm	**159**	**86.6**	169	81.2	143	96.0						
481.wrf	203	55.0	**192**	**58.1**	175	63.9						
482.sphinx3	368	52.9	371	52.5	**370**	**52.7**						

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
Filesystem page cache cleared with:
echo 1 > /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
```

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Test sponsor:	Hewlett-Packard Company	**Hardware Availability:**	Jun-2012
Tested by:	Hewlett-Packard Company	**Software Availability:**	Sep-2013

Platform Notes

```
BIOS Configuration:
 HP Power Profile set to Maximum Performance
 Memory Power Savings Mode set to Maximum Performance
 Collaborative Power Control set to Disabled
 Dynamic Power Capping Functionality set to Disabled
 Thermal Configuration set to Maximum Cooling
 Processor Power and Utilization Monitoring set to Disabled
 Minimum Processor Idle Power Core State set to C6 State
 Minimum Processor Idle Power Packages State set to Package C6 (non-retention) State

Sysinfo program /cpu2006.ic14.0/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on Dl380e-g8-sr Tue Sep 10 14:32:33 2013

This section contains SUT (System Under Test) info as seen by
some common utilities.  To remove or add to this section, see:
  http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo
   model name : Intel(R) Xeon(R) CPU E5-2420 0 @ 1.90GHz
      1 "physical id"s (chips)
      12 "processors"
   cores, siblings (Caution: counting these is hw and system dependent.  The
   following excerpts from /proc/cpuinfo might not be reliable.  Use with
   caution.)
      cpu cores : 6
      siblings  : 12
      physical 0: cores 0 1 2 3 4 5
   cache size : 15360 KB

From /proc/meminfo
   MemTotal:       16294148 kB
   HugePages_Total:       0
   Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
   Red Hat Enterprise Linux Server release 6.4 (Santiago)

From /etc/*release* /etc/*version*
   redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
   system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
   system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
   Linux Dl380e-g8-sr 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013
   x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Sep 10 10:20

SPEC is set to: /cpu2006
   Filesystem    Type    Size  Used Avail Use% Mounted on
   /dev/sda3     ext4    548G   13G  508G   3% /
```

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Platform Notes (Continued)

```
 Additional information from dmidecode:
   BIOS HP P73 07/01/2013
   Memory:
   2x HP 647648-071 4 GB 1333 MHz 1 rank
   8x UNKNOWN NOT AVAILABLE
   2x UNKNOWN NOT AVAILABLE 4 GB 1333 MHz 1 rank
(End of data from sysinfo program)
 Regarding the sysinfo display about the memory installed, the correct amount of
 memory is 16 GB and the dmidecode description should read as the following:
    2x HP 647648-071 4 GB 1333 MHz 1 rank
    2x UNKNOWN NOT AVAILABLE 4 GB 1333 MHz 1 rank
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/cpu2006/libs/32:/cpu2006/libs/64:/cpu2006/sh"
OMP_NUM_THREADS = "6"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RedHat EL 6.4
```

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

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Base Portability Flags (Continued)

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:
-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -ansi-alias

C++ benchmarks:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias

Fortran benchmarks:
-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch

Benchmarks using both Fortran and C:
-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -ansi-alias

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.html
http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-revB.20131009.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml
http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-revB.20131009.xml

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

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