SPEC® CFP2006 Result

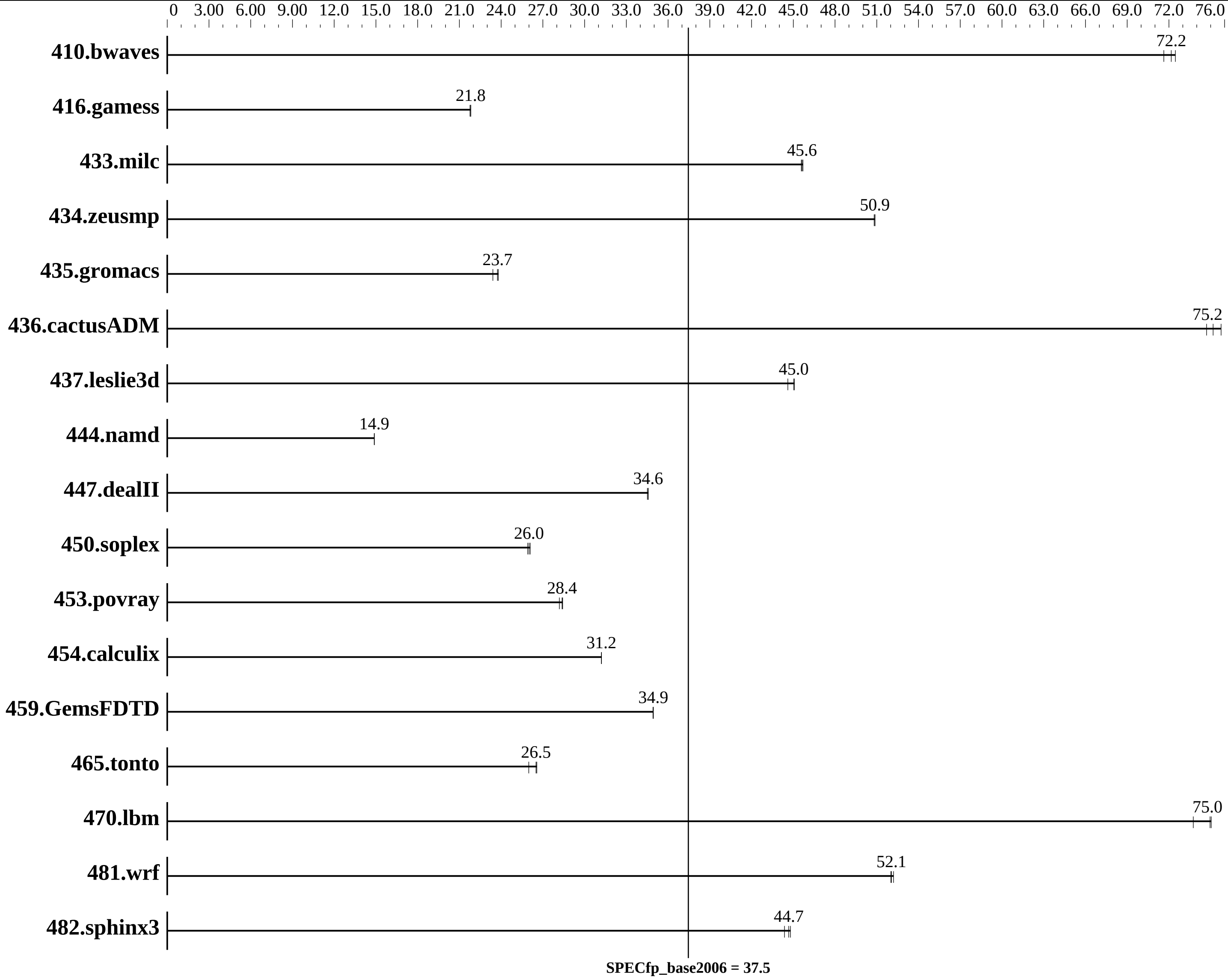
Hewlett-Packard Company

ProLiant DL360e Gen8
(2.20 GHz, Intel Xeon E5-2407)

SPECfp®2006 = Not Run

SPECfp_base2006 = 37.5

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 E5-2407
CPU Characteristics:	
CPU MHz:	2200
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 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

Continued on next page

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

Continued on next page

SPEC CFP2006 Result

Hewlett-Packard Company

ProLiant DL360e Gen8
(2.20 GHz, Intel Xeon E5-2407)

SPECfp2006 = Not Run

SPECfp_base2006 = 37.5

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

L3 Cache:	10 MB I+D on chip per chip
Other Cache:	None
Memory:	8 GB (2 x 4 GB 1Rx4 PC3-12800R-11, ECC, running at 1066 MHz and CL7)
Disk Subsystem:	2 x 200 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

	Base						Peak					
Benchmark	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
410.bwaves	188	72.5	190	71.6	**188**	**72.2**						
416.gamess	900	21.8	**898**	**21.8**	897	21.8						
433.milc	**201**	**45.6**	201	45.6	201	45.7						
434.zeusmp	179	50.8	179	50.9	**179**	**50.9**						
435.gromacs	**301**	**23.7**	305	23.4	300	23.8						
436.cactusADM	**159**	**75.2**	160	74.7	158	75.7						
437.leslie3d	211	44.6	**209**	**45.0**	209	45.1						
444.namd	539	14.9	539	14.9	**539**	**14.9**						
447.dealII	**331**	**34.6**	331	34.6	331	34.5						
450.soplex	322	25.9	320	26.1	**321**	**26.0**						
453.povray	187	28.4	**187**	**28.4**	189	28.2						
454.calculix	**264**	**31.2**	264	31.2	264	31.2						
459.GemsFDTD	**304**	**34.9**	304	34.9	304	34.9						
465.tonto	370	26.6	379	26.0	**371**	**26.5**						
470.lbm	183	75.0	186	73.7	**183**	**75.0**						
481.wrf	**215**	**52.1**	215	52.0	214	52.2						
482.sphinx3	435	44.8	**436**	**44.7**	439	44.4						

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>
```

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/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on DL360e-g8-sr Tue Sep 10 14:49:03 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 E5-2407 0 @ 2.20GHz
      1 "physical id"s (chips)
      4 "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 : 4
      siblings  : 4
      physical 0: cores 0 1 2 3
   cache size : 10240 KB

From /proc/meminfo
   MemTotal:        8151312 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 DL360e-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 10:12

SPEC is set to: /cpu2006
   Filesystem     Type     Size  Used Avail Use% Mounted on
   /dev/sda3      ext4     365G   13G  334G   4% /
```

Continued on next page

Platform Notes (Continued)

```
 Additional information from dmidecode:
   BIOS HP P73 07/01/2013
  Memory:
   10x UNKNOWN NOT AVAILABLE
   2x UNKNOWN NOT AVAILABLE 4 GB 1067 MHz 1 rank
(End of data from sysinfo program)
 Regarding the sysinfo display about the memory installed, the correct amount of
 memory is 8 GB and the dmidecode description should read as the following:
    2x UNKNOWN NOT AVAILABLE 4 GB 1067 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 = "2"

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
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64

Continued on next page

Base Portability Flags (Continued)

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.

Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 17:10:40 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 9 October 2013.