SPEC® CINT2006 Result

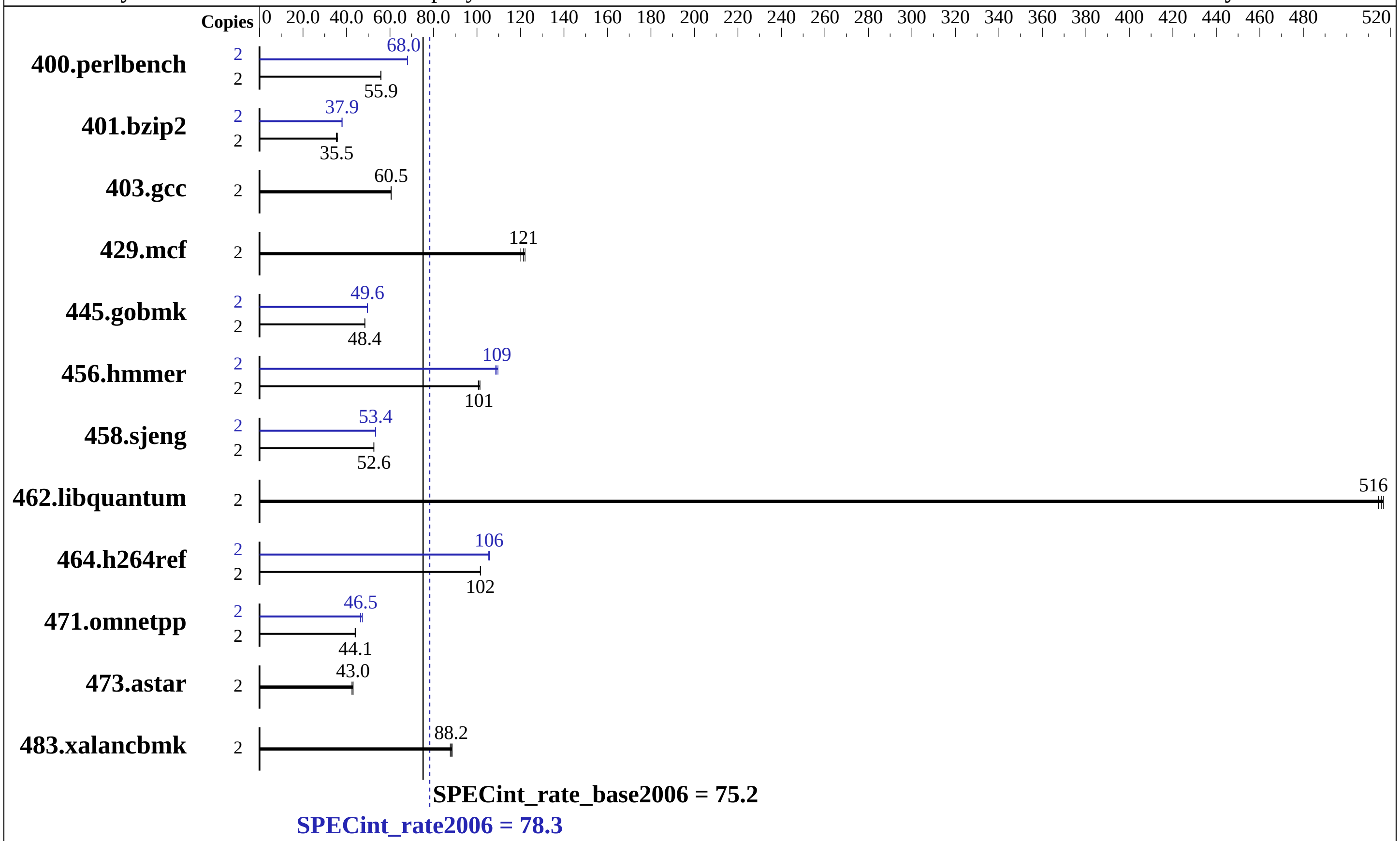
Hewlett-Packard Company

ProLiant ML10 Gen8
(3.20 GHz, Intel Pentium G2130)

SPECint®_rate2006 = 78.3

SPECint_rate_base2006 = 75.2

CPU2006 license: 3		**Test date:**	Jul-2013
Test sponsor:	Hewlett-Packard Company	**Hardware Availability:**	Aug-2013
Tested by:	Hewlett-Packard Company	**Software Availability:**	Feb-2013



Hardware

CPU Name:	Intel Pentium G2130
CPU Characteristics:	
CPU MHz:	3200
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1 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:	3 MB I+D on chip per chip
Other Cache:	None
Memory:	16 GB (2 x 8 GB 2Rx8 PC3-12800E-11, ECC)
Disk Subsystem:	1 x 250 GB 7.2 K SATA
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.4, (Santiago) 2.6.32-358.el6.x86_64
Compiler:	C/C++: Version 13.1.1.163 of Intel C++ Studio XE for Linux
Auto Parallel:	No
File System:	ext4
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V10.0

Hewlett-Packard Company

ProLiant ML10 Gen8
(3.20 GHz, Intel Pentium G2130)

SPECint_rate2006 = 78.3

SPECint_rate_base2006 = 75.2

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company
Test date: Jul-2013
Hardware Availability: Aug-2013
Software Availability: Feb-2013

Results Table

	Base							Peak						
Benchmark	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
400.perlbench	2	349	55.9	**350**	**55.9**	351	55.7	2	287	68.0	287	68.0	**287**	**68.0**
401.bzip2	2	546	35.3	537	35.9	**544**	**35.5**	2	509	37.9	507	38.0	**509**	**37.9**
403.gcc	2	**266**	**60.5**	266	60.6	266	60.5	2	**266**	**60.5**	266	60.6	266	60.5
429.mcf	2	152	120	**150**	**121**	149	122	2	152	120	**150**	**121**	149	122
445.gobmk	2	433	48.5	433	48.4	**433**	**48.4**	2	423	49.6	423	49.7	**423**	**49.6**
456.hmmer	2	185	101	**185**	**101**	184	101	2	**171**	**109**	172	109	170	110
458.sjeng	2	**460**	**52.6**	460	52.6	460	52.6	2	452	53.5	**453**	**53.4**	453	53.4
462.libquantum	2	**80.3**	**516**	80.2	517	80.5	515	2	**80.3**	**516**	80.2	517	80.5	515
464.h264ref	2	**436**	**102**	435	102	436	102	2	420	105	418	106	**419**	**106**
471.omnetpp	2	**283**	**44.1**	283	44.1	284	44.0	2	**269**	**46.5**	269	46.5	264	47.3
473.astar	2	326	43.1	330	42.5	**327**	**43.0**	2	326	43.1	330	42.5	**327**	**43.0**
483.xalancbmk	2	156	88.6	**157**	**88.2**	157	87.7	2	156	88.6	**157**	**88.2**	157	87.7

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

Submit Notes

```
The numactl mechanism was used to bind copies to processors. The config file option 'submit'
was used to generate numactl commands to bind each copy to a specific processor.
For details, please see the config file.
```

Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/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
 Collaborative Power Control set to Disabled
 Thermal Configuration set to Increased Cooling
 Processor Power and Utilization Monitoring set to Disabled
 Memory Refresh Rate set to 1x Refresh

Sysinfo program /cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on ml10 Wed Jun 26 00:18:26 2013
```

Continued on next page

Platform Notes (Continued)

```
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) Pentium(R) CPU G2130 @ 3.20GHz
      1 "physical id"s (chips)
      2 "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 : 2
      siblings  : 2
      physical 0: cores 0 1
   cache size : 3072 KB

From /proc/meminfo
   MemTotal:       16414924 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 ml10 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 Jun 26 00:09

SPEC is set to: /cpu2006
   Filesystem    Type    Size  Used Avail Use% Mounted on
   /dev/sda3     ext4    228G  9.6G  207G   5% /

Additional information from dmidecode:
  BIOS HP P88 06/26/2013
  Memory:
   2x Not Specified Not Specified
   2x Not Specified Not Specified 8 GB 1600 MHz 2 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 have one line reading as:
   2x Not Specified Not Specified 8 GB 1600 MHz 2 rank
```

Hewlett-Packard Company

ProLiant ML10 Gen8
(3.20 GHz, Intel Pentium G2130)

SPECint_rate2006 = 78.3

SPECint_rate_base2006 = 75.2

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company
Test date: Jul-2013
Hardware Availability: Aug-2013
Software Availability: Feb-2013

General Notes

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

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

Base Compiler Invocation

C benchmarks:
`icc -m32`

C++ benchmarks:
`icpc -m32`

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3`

C++ benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3`
`-Wl,-z,muldefs -L/sh -lsmartheap`

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

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

Continued on next page

Peak Compiler Invocation (Continued)

400.perlbench: `icc -m64`

401.bzip2: `icc -m64`

456.hmmer: `icc -m64`

458.sjeng: `icc -m64`

C++ benchmarks:
`icpc -m32`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64`
401.bzip2: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
458.sjeng: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

400.perlbench: `-xSSE4.2`(pass 2) `-prof-gen`(pass 1) `-ipo`(pass 2) `-O3`(pass 2) `-no-prec-div`(pass 2) `-prof-use`(pass 2) `-auto-ilp32`

401.bzip2: `-xSSE4.2`(pass 2) `-prof-gen`(pass 1) `-ipo`(pass 2) `-O3`(pass 2) `-no-prec-div`(pass 2) `-prof-use`(pass 2) `-opt-prefetch -auto-ilp32 -ansi-alias`

403.gcc: `basepeak = yes`

429.mcf: `basepeak = yes`

445.gobmk: `-xSSE4.2`(pass 2) `-prof-gen`(pass 1) `-prof-use`(pass 2) `-ansi-alias -opt-mem-layout-trans=3`

456.hmmer: `-xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32`

458.sjeng: `-xSSE4.2`(pass 2) `-prof-gen`(pass 1) `-ipo`(pass 2) `-O3`(pass 2) `-no-prec-div`(pass 2) `-prof-use`(pass 2) `-unroll4 -auto-ilp32`

Continued on next page

Peak Optimization Flags (Continued)

462.libquantum: `basepeak = yes`

464.h264ref: `-xSSE4.2`(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: `-xSSE4.2`(pass 2) `-prof-gen`(pass 1) `-ipo`(pass 2) `-O3`(pass 2) `-no-prec-div`(pass 2) `-prof-use`(pass 2) `-ansi-alias` `-opt-ra-region-strategy=block` `-Wl,-z,muldefs` `-L/sh` `-lsmartheap`

473.astar: `basepeak = yes`

483.xalancbmk: `basepeak = yes`

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-ic13-official-linux64.20130702.html
http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-A.20130813.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.20130702.xml
http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-A.20130813.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 16:20:23 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 13 August 2013.