SPEC® CINT2006 Result

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Hewlett-Packard Company

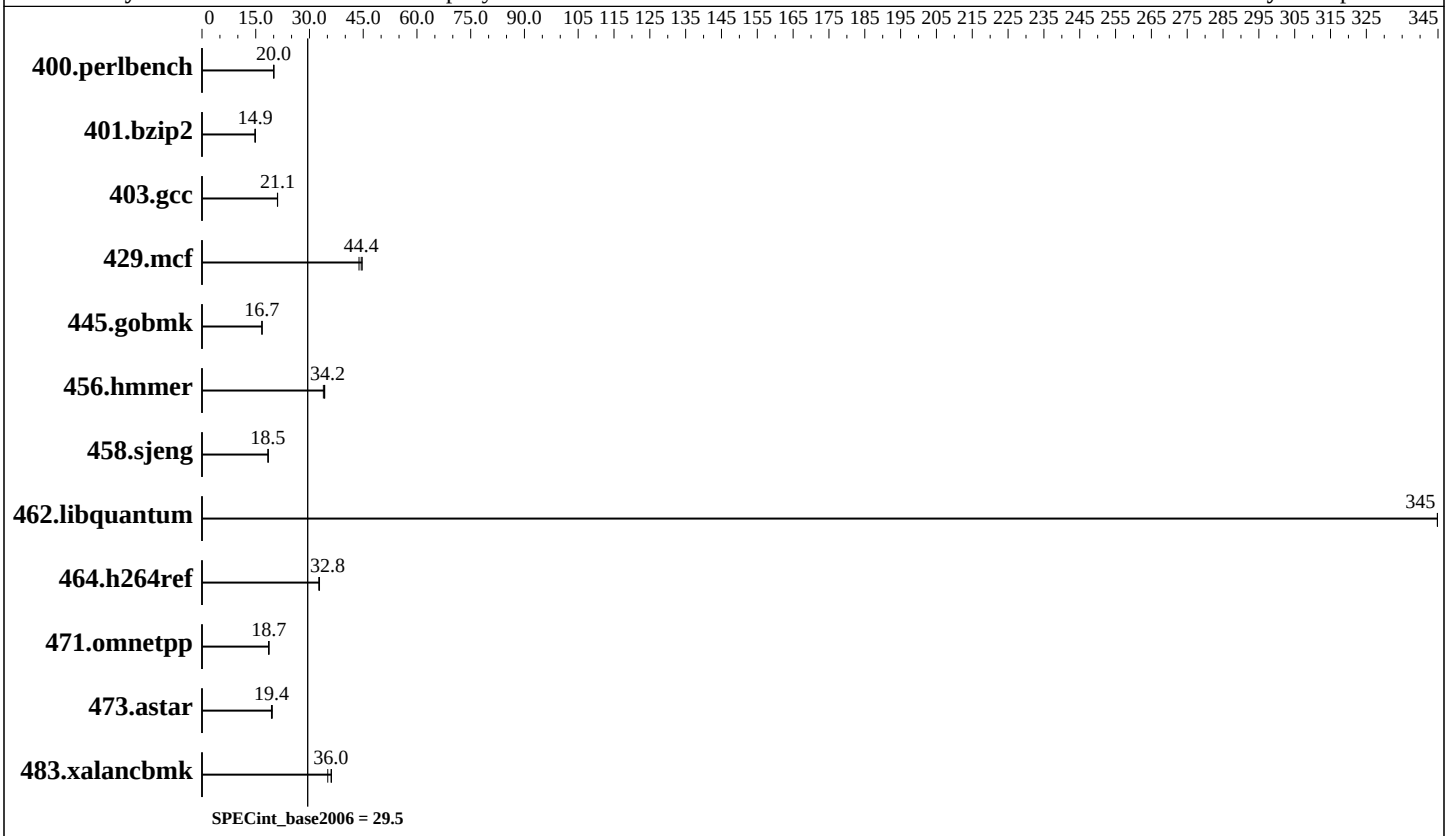
ProLiant DL360e Gen8
(2.20 GHz, Intel Xeon E5-2407)

SPECint®2006 = Not Run

SPECint_base2006 = 29.5

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



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
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

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;
Auto Parallel:	Yes
File System:	ext4
System State:	Run level 3 (multi-user)
Base Pointers:	32/64-bit
Peak Pointers:	Not Applicable
Other Software:	Microquill SmartHeap V10.0

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	**487**	**20.0**	488	20.0	487	20.0						
401.bzip2	649	14.9	**650**	**14.9**	652	14.8						
403.gcc	381	21.1	**382**	**21.1**	382	21.1						
429.mcf	208	43.8	204	44.7	**205**	**44.4**						
445.gobmk	626	16.8	**626**	**16.7**	627	16.7						
456.hmmer	275	33.9	**273**	**34.2**	272	34.3						
458.sjeng	656	18.4	655	18.5	**656**	**18.5**						
462.libquantum	60.1	345	60.1	345	**60.1**	**345**						
464.h264ref	679	32.6	675	32.8	**676**	**32.8**						
471.omnetpp	334	18.7	**335**	**18.7**	336	18.6						
473.astar	358	19.6	362	19.4	**361**	**19.4**						
483.xalancbmk	191	36.1	**191**	**36.0**	197	35.1						

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 10:21:39 2013

This section contains SUT (System Under Test) info as seen by
some common utilities.  To remove or add to this section, see:
```

Continued on next page

Platform Notes (Continued)

```
      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   12G  335G   4% /

    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
```

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:
```
-xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32
```

C++ benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh -lsmartheap64
```

Base Other Flags

C benchmarks:

Continued on next page

Base Other Flags (Continued)

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-linux64.20140128.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`

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For other inquiries, please contact webmaster@spec.org.

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