



SPEC® CINT2006 Result

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Hewlett-Packard Company

SPECint®_rate2006 = Not Run

ProLiant ML350p Gen8
(2.60 GHz, Intel Xeon E5-2650 v2)

SPECint_rate_base2006 = 660

CPU2006 license: 3

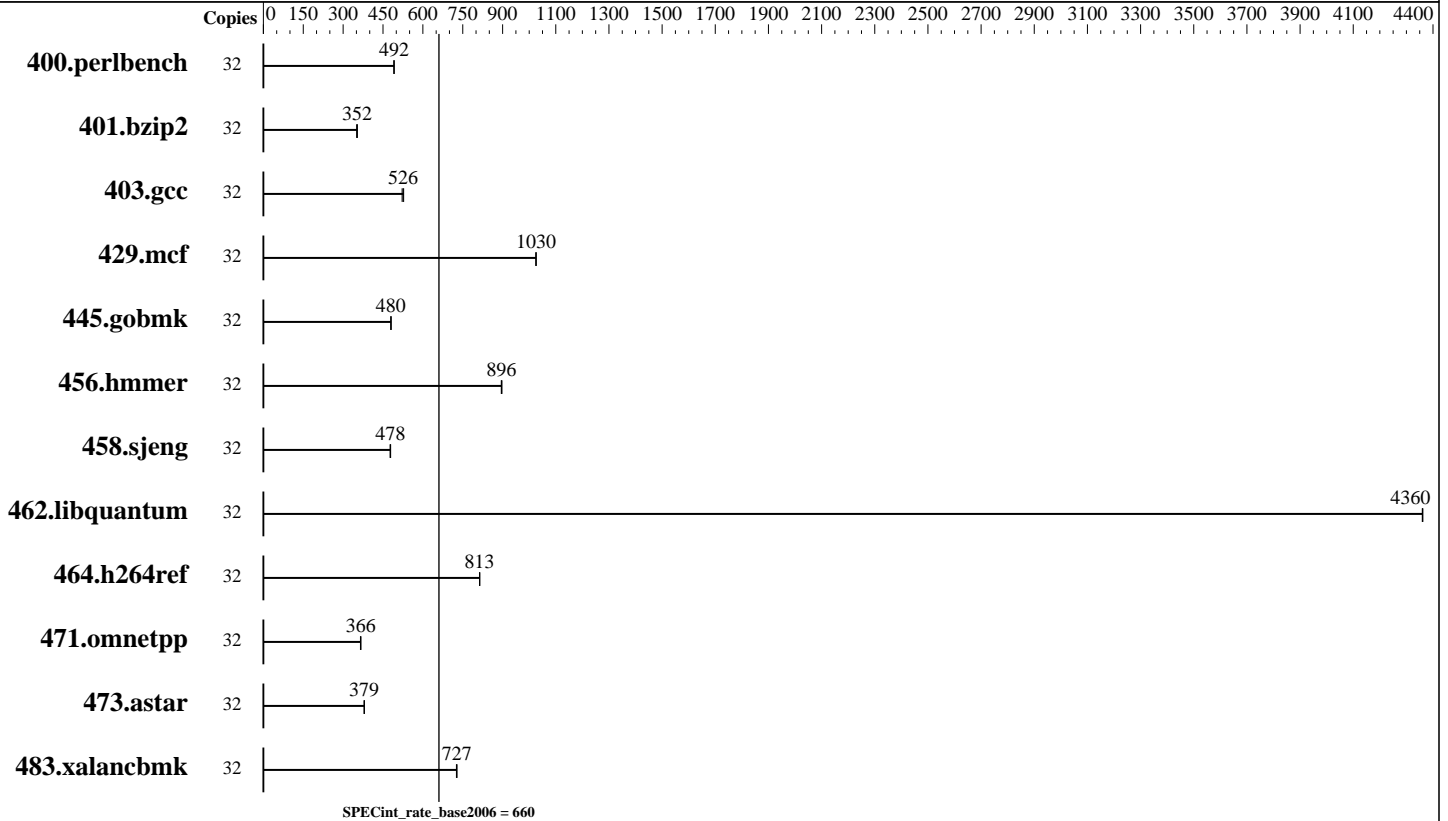
Test date: Apr-2014

Test sponsor: Hewlett-Packard Company

Hardware Availability: Dec-2013

Tested by: Hewlett-Packard Company

Software Availability: Nov-2013



Hardware

CPU Name: Intel Xeon E5-2650 v2
 CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz
 CPU MHz: 2600
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 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
 L3 Cache: 20 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3-14900R-13, ECC)
 Disk Subsystem: 2 x 300 GB 15 K SAS, RAID 1
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.5, (Santiago)
 2.6.32-431.el6.x86_64
 Compiler: C/C++: Version 14.0.0.080 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



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Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
400.perlbench	32	636	492	636	491	636	492									
401.bzip2	32	880	351	876	352	874	353									
403.gcc	32	494	522	488	528	490	526									
429.mcf	32	285	1030	284	1030	284	1030									
445.gobmk	32	700	480	699	480	699	480									
456.hammer	32	334	895	333	898	333	896									
458.sjeng	32	812	477	809	479	809	478									
462.libquantum	32	152	4360	152	4360	152	4360									
464.h264ref	32	871	813	870	814	871	813									
471.omnetpp	32	546	366	545	367	548	365									
473.astar	32	592	380	592	379	592	379									
483.xalancbmk	32	304	727	304	726	303	728									

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/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
 Collaborative Power Control set to Disabled
 Memory Power Savings Mode set to Maximum Performance
 Thermal Configuration set so Maximum Cooling
 Processor Power and Utilization Monitoring set to Disabled
 Memory Refresh Rate set to 1x Refresh

Sysinfo program /home/cpu/config/sysinfo.rev6818
 \$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191
 Continued on next page



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Platform Notes (Continued)

running on pl16.epc.external.hp.com Wed Apr 16 16:01:10 2014

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 E5-2650 v2 @ 2.60GHz
 2 "physical id"s (chips)
 32 "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     : 8
  siblings      : 16
  physical 0:   cores 0 1 2 3 4 5 6 7
  physical 1:   cores 0 1 2 3 4 5 6 7
cache size     : 20480 KB
```

```
From /proc/meminfo
MemTotal:      132119084 kB
HugePages_Total: 0
Hugepagesize:  2048 kB
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux pl16.epc.external.hp.com 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10
22:19:54 EST 2013 x86_64 x86_64 x86_64 GNU/Linux
```

run-level 3 Apr 16 15:02

```
SPEC is set to: /home/cpu
Filesystem                Type      Size  Used Avail Use% Mounted on
/dev/mapper/vg_pl16-lv_home ext4      222G   58G  153G  28% /home
```

```
Additional information from dmidecode:
BIOS HP P72 12/20/2013
Memory:
16x HP 712382-071 8 GB 1866 MHz 2 rank
8x UNKNOWN NOT AVAILABLE
```

(End of data from sysinfo program)
Regarding the sysinfo display about the memory installed, the correct amount of memory is 128 GB and the dmidecode description should have one line reading as:
16x HP 712382-071 8 GB 1866 MHz 2 rank



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General Notes

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

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

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

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-revD.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>
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For questions about this result, please contact the tester.
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