SPEC® CINT2006 Result

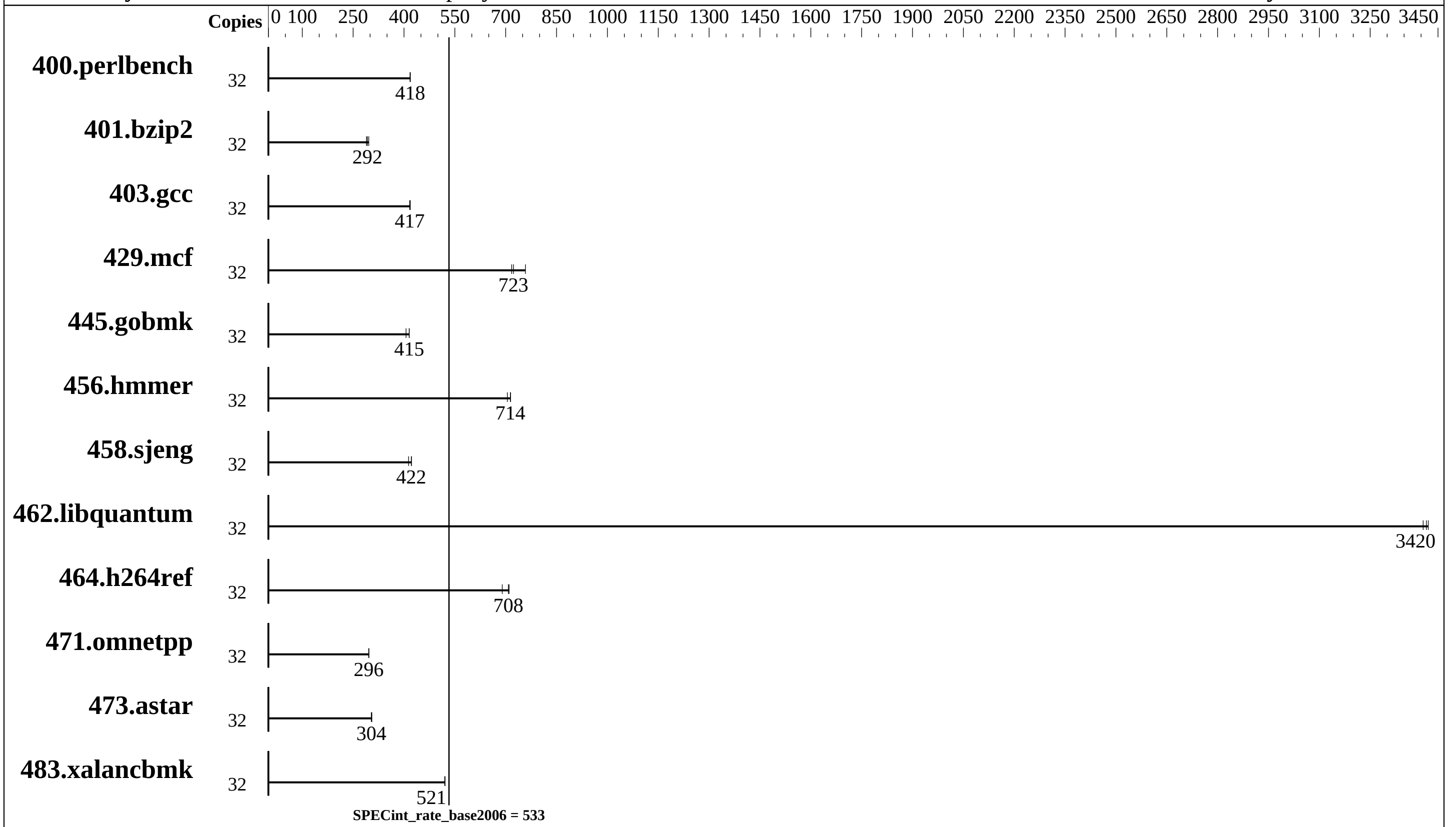
Hewlett-Packard Company

ProLiant DL360e Gen8
(2.10 GHz, Intel Xeon E5-2450)

SPECint®_rate2006 = Not Run

SPECint_rate_base2006 = 533

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



Hardware

CPU Name:	Intel Xeon E5-2450
CPU Characteristics:	Intel Turbo Boost Technology up to 2.90 GHz
CPU MHz:	2100
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:	48 GB (6 x 8 GB 2Rx8 PC3-12800E-11, ECC)
Disk Subsystem:	2 x 300 GB 10 K SAS, RAID 1
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 13.0.0.133 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 HP Array Configuration Utility, CLI version

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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	**747**	**418**	748	418	746	419							
401.bzip2	32	**1057**	**292**	1043	296	1067	289							
403.gcc	32	616	419	618	417	**617**	**417**							
429.mcf	32	385	758	**404**	**723**	407	718							
445.gobmk	32	827	406	808	416	**808**	**415**							
456.hmmer	32	**418**	**714**	418	714	424	705							
458.sjeng	32	917	422	**919**	**422**	936	414							
462.libquantum	32	195	3410	**194**	**3420**	194	3420							
464.h264ref	32	**1001**	**708**	997	710	1027	690							
471.omnetpp	32	675	296	676	296	**675**	**296**							
473.astar	32	740	304	736	305	**739**	**304**							
483.xalancbmk	32	**424**	**521**	425	520	424	521							

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>
Accelerator Ratio for Reads/Writes set to = 100% Read / 0% Write
in HP Array Configuration Utility, CLI version
```

Platform Notes

```
BIOS Configuration:
 HP Power Profile set to Maximum Performance
 Collaborative Power Control set to Disabled
 Thermal Configuration set to Maximum Cooling
 Processor Power and Utilization Monitoring set to Disabled

Sysinfo program /cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
```

Continued on next page

Platform Notes (Continued)

```
running on DL360Gen8-tlm Thu May 23 15:11:26 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 E5-2450 0 @ 2.10GHz
      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:       49385380 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 DL360Gen8-tlm 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 May 23 15:09

SPEC is set to: /cpu2006
   Filesystem    Type    Size  Used Avail Use% Mounted on
   /dev/sda3     ext4    181G   50G  123G  29% /

Additional information from dmidecode:
  BIOS HP P73 12/14/2012
  Memory:
   6x HP Not Specified 8 GB 1600 MHz 2 rank
   6x UNKNOWN Not Specified

(End of data from sysinfo program)
Regarding the sysinfo display about the memory installed, the correct amount of
memory is 48 GB and the dmidecode description should read:
   6x HP Not Specified 8 GB 1600 MHz 2 rank
```

General Notes

```
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/cpu2006/libs2/32:/cpu2006/libs2/64"

 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

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-A.20120829.html
http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.html

You can also download the XML flags sources by saving the following links:

http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-A.20120829.xml
http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.xml

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

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