



SPEC[®] CINT2006 Result

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Hewlett-Packard Company

SPECint[®]_rate2006 = Not Run

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

SPECint_rate_base2006 = 535

CPU2006 license: 3

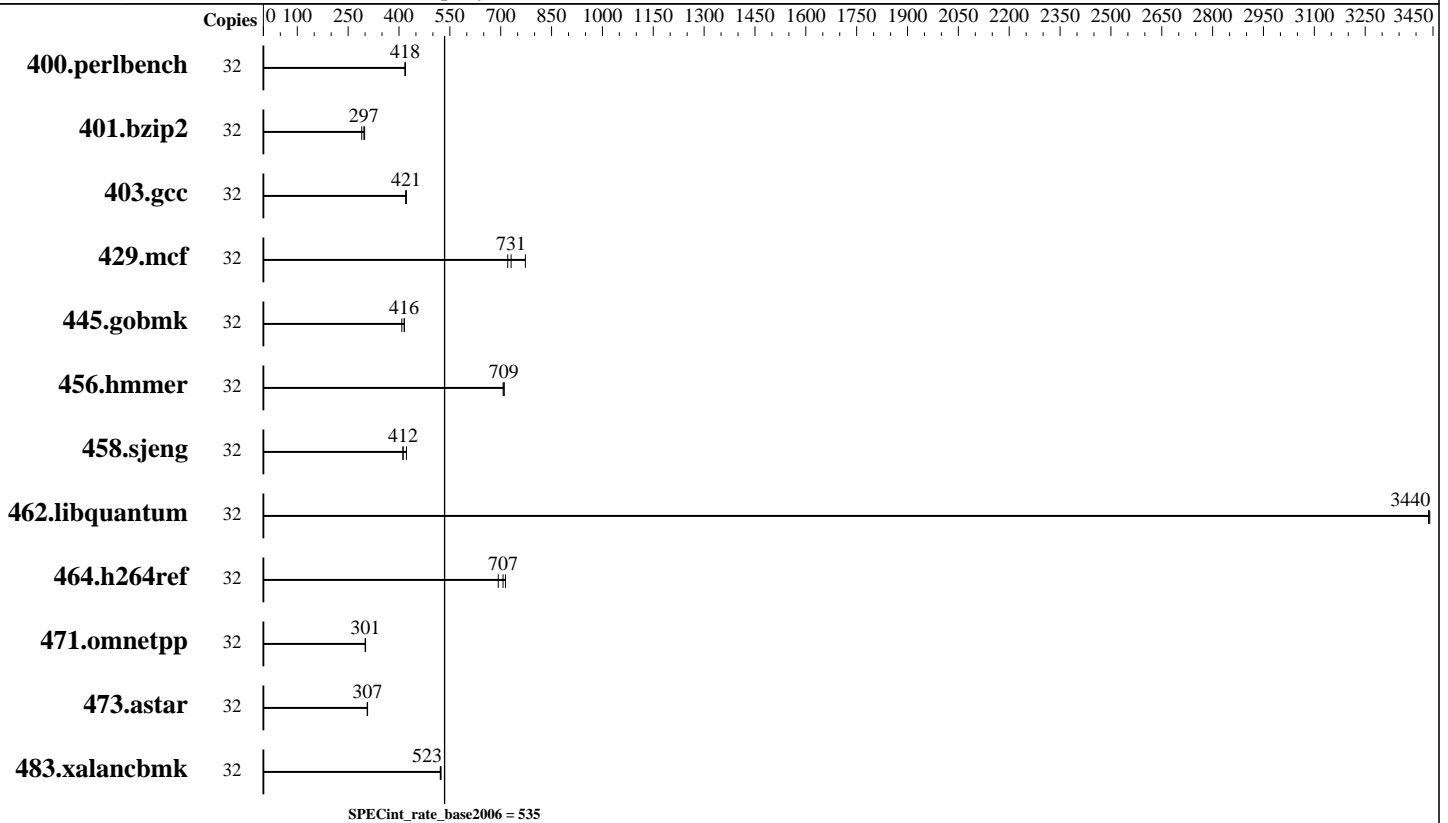
Test date: May-2013

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 2Rx4 PC3-12800R-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	419	747	418	748	418							
401.bzip2	32	1041	297	1034	299	1064	290							
403.gcc	32	611	422	613	420	612	421							
429.mcf	32	378	773	405	721	399	731							
445.gobmk	32	822	408	808	416	808	416							
456.hammer	32	420	710	422	707	421	709							
458.sjeng	32	941	412	918	422	939	412							
462.libquantum	32	193	3440	193	3440	193	3440							
464.h264ref	32	1022	693	992	714	1002	707							
471.omnetpp	32	664	301	666	300	664	301							
473.astar	32	732	307	731	307	733	306							
483.xalancbmk	32	422	523	421	524	423	522							

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



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Platform Notes (Continued)

running on DL360Gen8-tlm Wed May 22 16:29:00 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 22 16:27
```

```
SPEC is set to: /cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda3        ext4      181G   39G  134G   23% /
```

```
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



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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 -lsmarthearp

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-ic13-official-linux64.html>

<http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-A.20120829.html>



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

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-A.20120829.xml>

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

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