SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant DL360e Gen8
(2.00 GHz, Intel Xeon E5-2430L)

SPECint®_rate2006 = 384
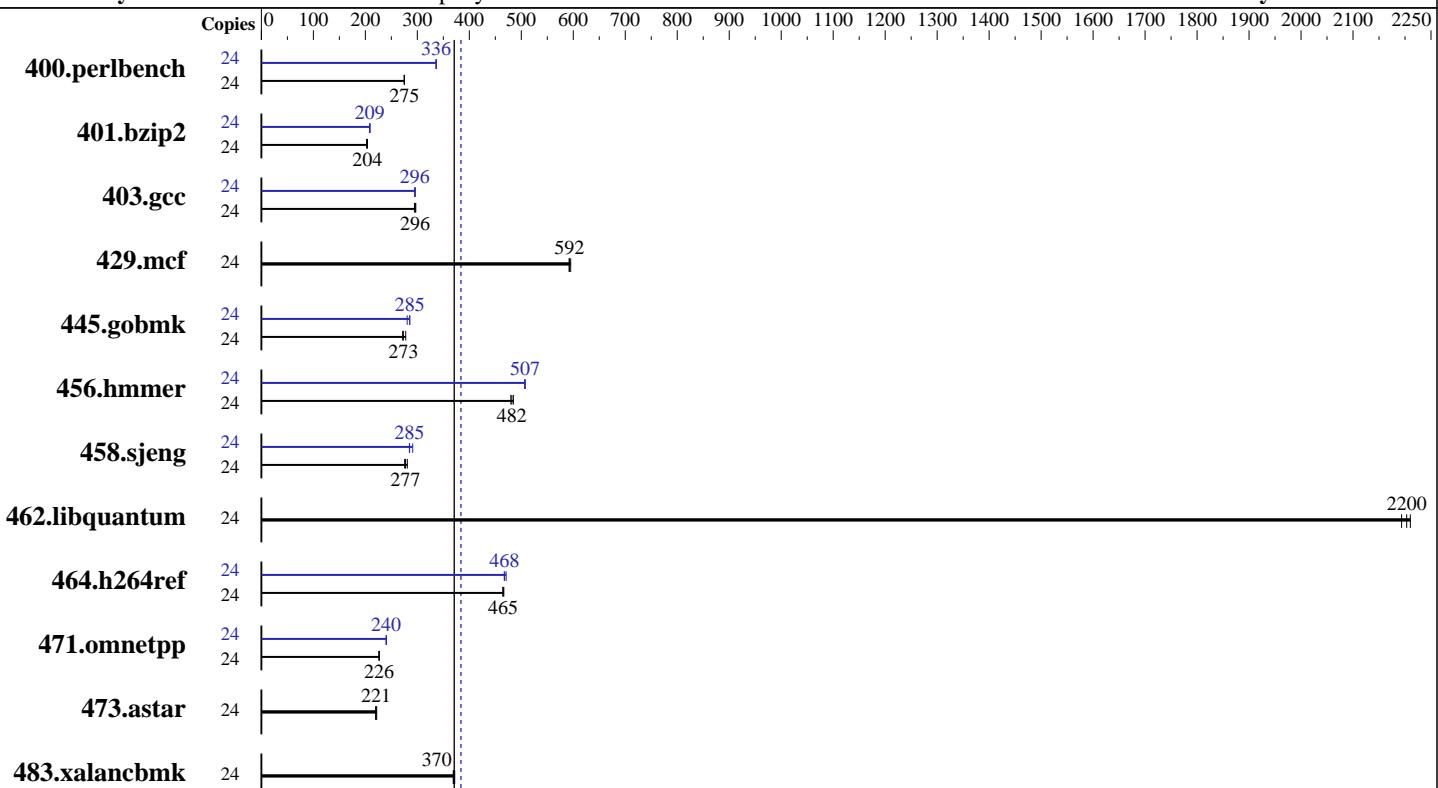
SPECint_rate_base2006 = 371

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: Nov-2013
Hardware Availability: Jul-2012
Software Availability: Oct-2013

Benchmark	Copies	Base	Peak
400.perlbench	24	275	336
401.bzip2	24	204	209
403.gcc	24	296	296
429.mcf	24	592	
445.gobmk	24	273	285
456.hmmer	24	482	507
458.sjeng	24	277	285
462.libquantum	24	2200	
464.h264ref	24	465	468
471.omnetpp	24	226	240
473.astar	24	221	
483.xalancbmk	24	370	

SPECint_rate_base2006 = 371

SPECint_rate2006 = 384

Hardware

CPU Name: Intel Xeon E5-2430L
CPU Characteristics: Intel Turbo Boost Technology up to 2.50 GHz
CPU MHz: 2000
FPU: Integrated
CPU(s) enabled: 12 cores, 2 chips, 6 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: 15 MB I+D on chip per chip
Other Cache: None
Memory: 96 GB (12 x 8 GB 2Rx4 PC3-12800R-11, ECC, running at 1333 MHz and CL9)
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) Kernel 2.6.32-358.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 HP Array Configuration Utility, CLI version

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant DL360e Gen8
(2.00 GHz, Intel Xeon E5-2430L)

SPECint_rate2006 = 384

SPECint_rate_base2006 = 371

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: Nov-2013
Hardware Availability: Jul-2012
Software Availability: Oct-2013

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	852	275	853	275	**853**	**275**	24	**698**	**336**	698	336	697	337
401.bzip2	24	1135	204	1145	202	**1136**	**204**	24	**1110**	**209**	1112	208	1108	209
403.gcc	24	656	294	650	297	**653**	**296**	24	653	296	**654**	**296**	655	295
429.mcf	24	368	595	**369**	**592**	370	592	24	368	595	**369**	**592**	370	592
445.gobmk	24	**922**	**273**	907	278	926	272	24	898	280	**882**	**285**	882	285
456.hmmer	24	462	485	467	480	**465**	**482**	24	441	507	442	506	**441**	**507**
458.sjeng	24	**1047**	**277**	1054	276	1034	281	24	997	291	**1018**	**285**	1020	285
462.libquantum	24	227	2190	225	2210	**226**	**2200**	24	227	2190	225	2210	**226**	**2200**
464.h264ref	24	1144	464	**1142**	**465**	1139	466	24	1137	467	1128	471	**1135**	**468**
471.omnetpp	24	663	226	**663**	**226**	661	227	24	625	240	**624**	**240**	624	240
473.astar	24	759	222	767	220	**764**	**221**	24	759	222	767	220	**764**	**221**
483.xalancbmk	24	445	372	449	369	**448**	**370**	24	445	372	449	369	**448**	**370**

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
    Disabled unused Linux services through "stop_services.sh" before running.

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
     Memory Refresh Rate set to 1X

Hewlett-Packard Company

SPECint_rate2006 = 384

ProLiant DL360e Gen8
(2.00 GHz, Intel Xeon E5-2430L)

SPECint_rate_base2006 = 371

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: Nov-2013
Hardware Availability: Jul-2012
Software Availability: Oct-2013

Platform Notes (Continued)

```
Sysinfo program /cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Fri Nov  8 15:34:42 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 E5-2430L 0 @ 2.00GHz
      2 "physical id"s (chips)
      24 "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 : 6
      siblings  : 12
      physical 0: cores 0 1 2 3 4 5
      physical 1: cores 0 1 2 3 4 5
   cache size : 15360 KB

From /proc/meminfo
   MemTotal:        99032972 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 localhost.localdomain 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 Nov 8 15:15

SPEC is set to: /cpu2006
   Filesystem      Type     Size  Used Avail Use% Mounted on
   /dev/sda3       ext4      66G  9.4G   53G  16% /

Additional information from dmidecode:
  BIOS HP P73 07/01/2013
  Memory:
   12x HP 689911-071 8 GB 1333 MHz 2 rank

(End of data from sysinfo program)
```

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant DL360e Gen8
(2.00 GHz, Intel Xeon E5-2430L)

SPECint_rate2006 =   384

SPECint_rate_base2006 = 371

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: Nov-2013
Hardware Availability: Jul-2012
Software Availability: Oct-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

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant DL360e Gen8
(2.00 GHz, Intel Xeon E5-2430L)

SPECint_rate2006 =   384

SPECint_rate_base2006 = 371

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: Nov-2013
Hardware Availability: Jul-2012
Software Availability: Oct-2013

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: -xSSE4.2 -ipo -O3 -no-prec-div

     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

Hewlett-Packard Company

ProLiant DL360e Gen8
(2.00 GHz, Intel Xeon E5-2430L)

SPECint_rate2006 =   384

SPECint_rate_base2006 = 371

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Nov-2013

Hardware Availability: Jul-2012

Software Availability: Oct-2013

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-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

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 17:56:53 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 3 December 2013.