SPEC® CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant XL220a Gen8 v2
(3.70 GHz, Intel Xeon E3-1281 v3)

SPECint®_rate2006 =   227

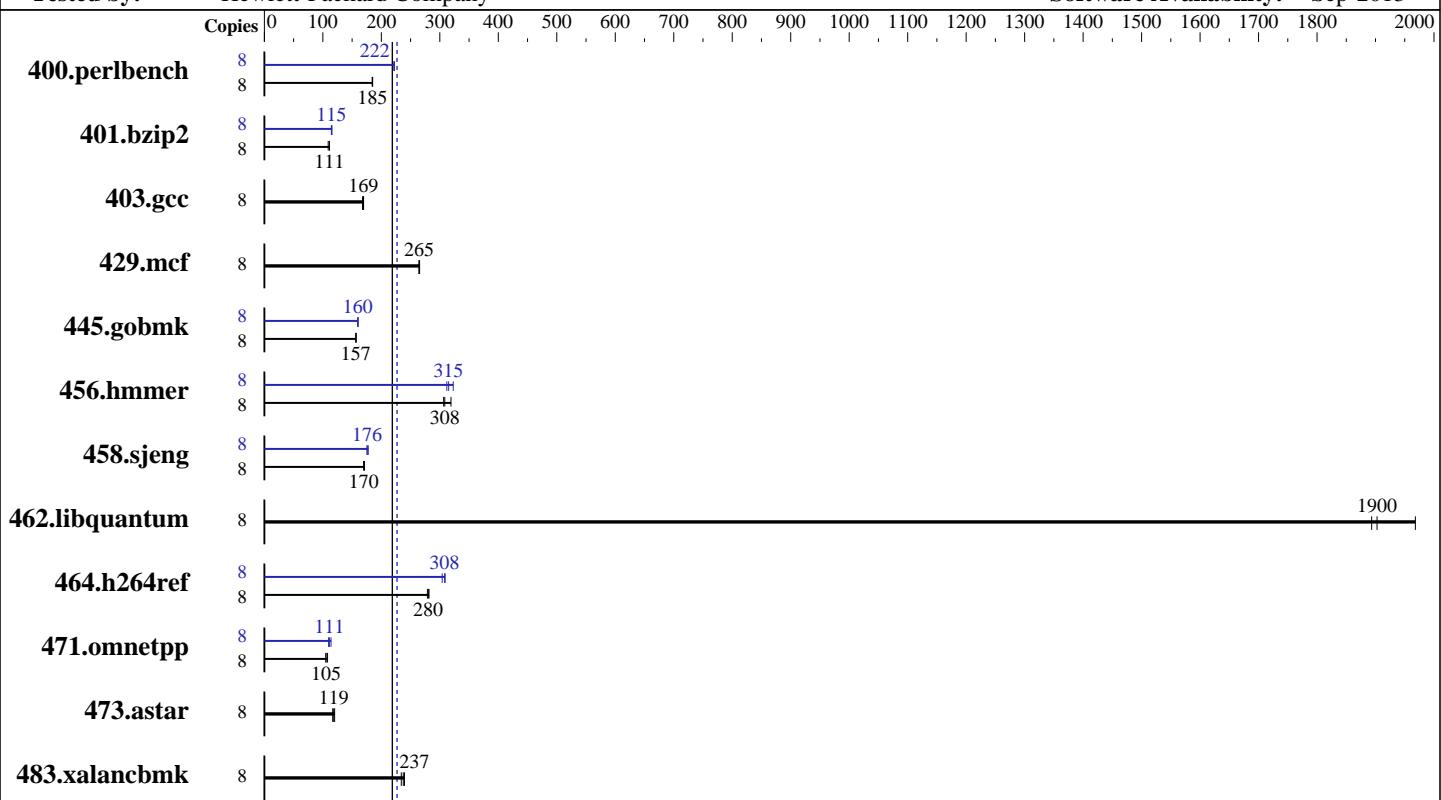SPECint_rate_base2006 =   219

CPU2006 license: 3		**Test date:**	May-2014
Test sponsor:	Hewlett-Packard Company	**Hardware Availability:**	Jun-2014
Tested by:	Hewlett-Packard Company	**Software Availability:**	Sep-2013

SPECint_rate_base2006 = 219

SPECint_rate2006 = 227

Hardware

CPU Name:	Intel Xeon E3-1281 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 4.10 GHz
CPU MHz:	3700
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	8 MB I+D on chip per chip
Other Cache:	None
Memory:	16 GB (4 x 4 GB 2Rx8 PC3-12800E-11, ECC)
Disk Subsystem:	1 x 300 GB 15 K SAS, RAID 0
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 11 (x86_64) SP3 Kernel 3.0.76-0.11-default
Compiler:	C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
Auto Parallel:	No
File System:	ext3
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V10.0

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant XL220a Gen8 v2
(3.70 GHz, Intel Xeon E3-1281 v3)

SPECint_rate2006 =   227

SPECint_rate_base2006 = 219

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

Test date: May-2014
Hardware Availability: Jun-2014
Software Availability: Sep-2013

Results Table

Benchmark	Base Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Peak Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	422	185	**423**	**185**	424	184	8	**352**	**222**	352	222	353	222
401.bzip2	8	707	109	**694**	**111**	693	111	8	673	115	668	116	**673**	**115**
403.gcc	8	**380**	**169**	384	168	380	170	8	**380**	**169**	384	168	380	170
429.mcf	8	**276**	**265**	276	264	275	265	8	**276**	**265**	276	264	275	265
445.gobmk	8	537	156	535	157	**536**	**157**	8	**524**	**160**	526	160	524	160
456.hmmer	8	234	319	**242**	**308**	243	307	8	**237**	**315**	231	323	239	312
458.sjeng	8	570	170	566	171	**569**	**170**	8	545	178	551	176	**551**	**176**
462.libquantum	8	**87.1**	**1900**	84.2	1970	87.5	1890	8	**87.1**	**1900**	84.2	1970	87.5	1890
464.h264ref	8	629	282	**632**	**280**	635	279	8	573	309	**574**	**308**	582	304
471.omnetpp	8	476	105	**474**	**105**	463	108	8	439	114	455	110	**450**	**111**
473.astar	8	467	120	481	117	**474**	**119**	8	467	120	481	117	**474**	**119**
483.xalancbmk	8	236	234	**232**	**237**	230	240	8	236	234	**232**	**237**	230	240

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

    The taskset mechanism was used to bind copies to processors. The config file option 'submit'
    was used to generate taskset 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

Platform Notes

      BIOS Configuration:
      HP Power Profile set to Maximum Performance
      Minimum Processor Idle Power Core State set to C6 State
      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 Disabled

      Sysinfo program /cpu2006/config/sysinfo.rev6818
      $Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
      running on XL220a-Gen8-v2 Thu May 15 20:19:34 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

Hewlett-Packard Company

SPECint_rate2006 =   227

ProLiant XL220a Gen8 v2
(3.70 GHz, Intel Xeon E3-1281 v3)

SPECint_rate_base2006 = 219

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

Test date: May-2014
Hardware Availability: Jun-2014
Software Availability: Sep-2013

Platform Notes (Continued)

```
From /proc/cpuinfo
   model name : Intel(R) Xeon(R) CPU E3-1281 v3 @ 3.70GHz
      1 "physical id"s (chips)
      8 "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  : 8
      physical 0: cores 0 1 2 3
   cache size : 8192 KB

From /proc/meminfo
   MemTotal:       16291732 kB
   HugePages_Total:       0
   Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
   SUSE Linux Enterprise Server 11 (x86_64)

From /etc/*release* /etc/*version*
   SuSE-release:
      SUSE Linux Enterprise Server 11 (x86_64)
      VERSION = 11
      PATCHLEVEL = 3

uname -a:
   Linux XL220a-Gen8-v2 3.0.76-0.11-default #1 SMP Fri Jun 14 08:21:43 UTC 2013
   (ccab990) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 May 15 20:11 last=S

SPEC is set to: /cpu2006
   Filesystem      Type  Size  Used Avail Use% Mounted on
   /dev/sda3       ext3  271G  9.0G  261G   4% /

Additional information from dmidecode:
  BIOS HP P94 04/29/2014
  Memory:
   4x HP 669238-071 4 GB 1600 MHz

(End of data from sysinfo program)
```

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 RedHat EL 6.4
```

Hewlett-Packard Company

ProLiant XL220a Gen8 v2
(3.70 GHz, Intel Xeon E3-1281 v3)

SPECint_rate2006 =   227

SPECint_rate_base2006 = 219

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

Test date: May-2014
Hardware Availability: Jun-2014
Software Availability: Sep-2013

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:
    -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
    -opt-mem-layout-trans=3

C++ benchmarks:
    -xCORE-AVX2 -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

    400.perlbench: icc -m64

    401.bzip2: icc -m64

    456.hmmer: icc -m64

    458.sjeng: icc -m64

Continued on next page

Hewlett-Packard Company

ProLiant XL220a Gen8 v2
(3.70 GHz, Intel Xeon E3-1281 v3)

SPECint_rate2006 =   227

SPECint_rate_base2006 = 219

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

Test date: May-2014
Hardware Availability: Jun-2014
Software Availability: Sep-2013

Peak Compiler Invocation (Continued)

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: -xCORE-AVX2(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: -xCORE-AVX2(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: basepeak = yes

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
           -ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
           -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
           -unroll4 -auto-ilp32

462.libquantum: basepeak = yes

464.h264ref: -xCORE-AVX2(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:

Hewlett-Packard Company

ProLiant XL220a Gen8 v2
(3.70 GHz, Intel Xeon E3-1281 v3)

SPECint_rate2006 = 227

SPECint_rate_base2006 = 219

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

Test date: May-2014
Hardware Availability: Jun-2014
Software Availability: Sep-2013

Peak Optimization Flags (Continued)

471.omnetpp: `-xCORE-AVX2(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-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
http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-revD.xml

SPEC and SPECint are registered trademarks of the Standard Performance
Evaluation Corporation. All other brand and product names appearing in
this result are trademarks or registered trademarks of their respective
holders.

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 22:54:34 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 10 June 2014.