SPEC® CINT2006 Result
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Huawei
Huawei CH140

$SPECint®2006 =$ 60.0

$SPECint\_base2006 =$ 55.3

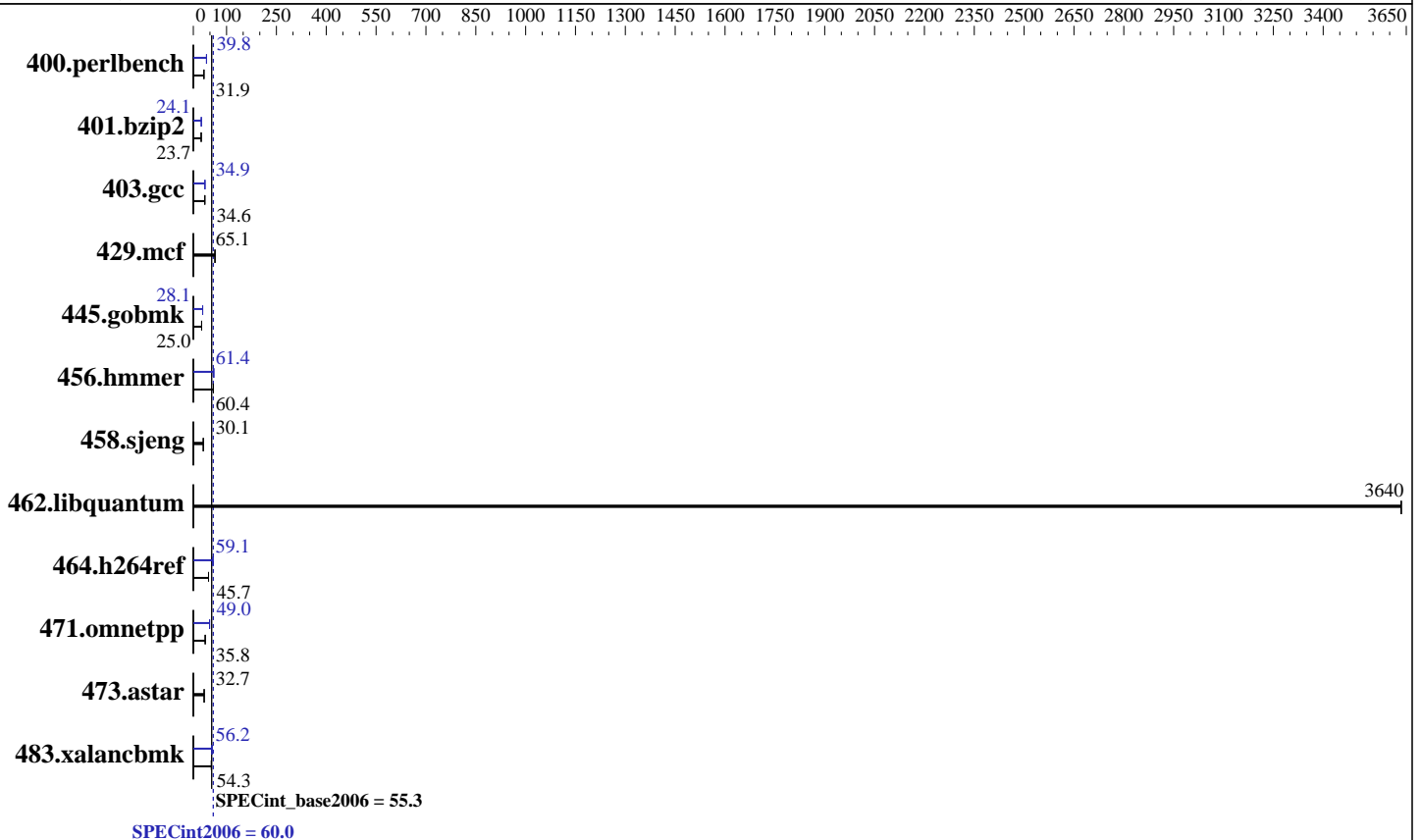0 100 250 400 550 700 850 1000 1150 1300 1450 1600 1750 1900 2050 2200 2350 2500 2650 2800 2950 3100 3250 3400 3650

- **400.perlbench** 39.8 / 31.9
- **401.bzip2** 24.1 / 23.7
- **403.gcc** 34.9 / 34.6
- **429.mcf** 65.1
- **445.gobmk** 28.1 / 25.0
- **456.hmmer** 61.4 / 60.4
- **458.sjeng** 30.1
- **462.libquantum** 3640
- **464.h264ref** 59.1 / 45.7
- **471.omnetpp** 49.0 / 35.8
- **473.astar** 32.7
- **483.xalancbmk** 56.2 / 54.3

SPECint_base2006 = 55.3

SPECint2006 = 60.0

Hardware

CPU Name:	Intel Xeon E5-2697 v2
CPU Characteristics:	Intel Turbo Boost Technology up to 3.50 GHz
CPU MHz:	2700
FPU:	Integrated
CPU(s) enabled:	24 cores, 2 chips, 12 cores/chip
CPU(s) orderable:	1,2 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:	30 MB I+D on chip per chip
Other Cache:	None
Memory:	128 GB (8 x 16 GB 2Rx4 PC3-14900R-13,ECC)
Disk Subsystem:	1 X 500 GB SATA 7200RPM
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 12.1.0.225 of Intel C++ Studio XE for Linux
Auto Parallel:	Yes
File System:	ext3
System State:	Run level 3 (multi-user)
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V9.01

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CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: May-2014

Hardware Availability: Sep-2013

Software Availability: Nov-2013

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	306	31.9	**306**	**31.9**	306	31.9	245	39.8	**246**	**39.8**	247	39.6
401.bzip2	**408**	**23.7**	408	23.6	408	23.7	401	24.1	400	24.1	**401**	**24.1**
403.gcc	232	34.6	**232**	**34.6**	233	34.5	230	35.0	**231**	**34.9**	231	34.9
429.mcf	139	65.5	**140**	**65.1**	141	64.9	139	65.5	**140**	**65.1**	141	64.9
445.gobmk	420	25.0	420	25.0	**420**	**25.0**	373	28.2	373	28.1	**373**	**28.1**
456.hmmer	**154**	**60.4**	154	60.6	154	60.4	152	61.3	**152**	**61.4**	151	61.8
458.sjeng	403	30.0	**403**	**30.1**	402	30.1	403	30.0	**403**	**30.1**	402	30.1
462.libquantum	5.70	3640	5.70	3630	**5.70**	**3640**	5.70	3640	5.70	3630	**5.70**	**3640**
464.h264ref	484	45.7	**484**	**45.7**	483	45.8	**374**	**59.1**	375	59.1	374	59.2
471.omnetpp	174	35.9	**175**	**35.8**	175	35.7	127	49.1	**128**	**49.0**	128	48.8
473.astar	215	32.7	216	32.5	**215**	**32.7**	215	32.7	216	32.5	**215**	**32.7**
483.xalancbmk	**127**	**54.3**	127	54.3	127	54.4	123	56.2	**123**	**56.2**	123	56.0

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

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

```
BIOS configuration:
Set Power Efficiency Mode to Performance
Set Intel HT Technology to Disable
Sysinfo program /spec/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on localhost Wed May 28 11:52:29 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 E5-2697 v2 @ 2.70GHz
     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 : 12
     siblings  : 12
     physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
     physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13
  cache size : 30720 KB
```

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Platform Notes (Continued)

```
From /proc/meminfo
   MemTotal:       132114848 kB
   HugePages_Total:        0
   Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
   Red Hat Enterprise Linux Server release 6.5 (Santiago)

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 localhost 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 May 28 11:44

SPEC is set to: /spec
   Filesystem      Type  Size  Used Avail Use% Mounted on
   /dev/sda2       ext3  455G   24G  409G   6% /

Additional information from dmidecode:
  Memory:
   8x Samsung M393B2G70BH0-CMA 16 GB 1866 MHz 2 rank

(End of data from sysinfo program)
```

General Notes

```
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,0,1"
LD_LIBRARY_PATH = "/spec/libs/32:/spec/libs/64"
OMP_NUM_THREADS = "24"

 Binaries compiled on a system with 2 x Xeon X5645 CPU + 16GB memory
 using RHEL 6.1
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
```

Base Compiler Invocation

C benchmarks:
      icc -m64

C++ benchmarks:
      icpc -m64

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Base Portability Flags

```
    400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
      401.bzip2: -DSPEC_CPU_LP64
       403.gcc: -DSPEC_CPU_LP64
       429.mcf: -DSPEC_CPU_LP64
     445.gobmk: -DSPEC_CPU_LP64
     456.hmmer: -DSPEC_CPU_LP64
      458.sjeng: -DSPEC_CPU_LP64
  462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
    464.h264ref: -DSPEC_CPU_LP64
    471.omnetpp: -DSPEC_CPU_LP64
      473.astar: -DSPEC_CPU_LP64
  483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
```

Base Optimization Flags

C benchmarks:
```
    -xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32
```

C++ benchmarks:
```
    -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
    -Wl,-z,muldefs -L/smartheap -lsmartheap64
```

Base Other Flags

C benchmarks:

```
    403.gcc: -Dalloca=_alloca
```

Peak Compiler Invocation

C benchmarks (except as noted below):
```
    icc  -m64
```

```
    400.perlbench: icc -m32
```

```
    445.gobmk: icc -m32
```

```
    464.h264ref: icc -m32
```

C++ benchmarks (except as noted below):
```
    icpc -m32
```

```
    473.astar: icpc -m64
```

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Hardware Availability: Sep-2013
Software Availability: Nov-2013

Peak Portability Flags

```
      400.perlbench: -DSPEC_CPU_LINUX_IA32
           401.bzip2: -DSPEC_CPU_LP64
             403.gcc: -DSPEC_CPU_LP64
             429.mcf: -DSPEC_CPU_LP64
          456.hmmer: -DSPEC_CPU_LP64
           458.sjeng: -DSPEC_CPU_LP64
      462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
           473.astar: -DSPEC_CPU_LP64
      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)
                     -opt-prefetch -ansi-alias

           401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
                     -O3(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32
                     -opt-prefetch -ansi-alias

             403.gcc: -xAVX -ipo -O3 -no-prec-div -inline-calloc
                     -opt-malloc-options=3 -auto-ilp32

             429.mcf: basepeak = yes

           445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
                     -ansi-alias

          456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
                     -ansi-alias

           458.sjeng: basepeak = yes

      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)
                     -opt-ra-region-strategy=block          -ansi-alias
                     -Wl,-z,muldefs -L/smartheap -lsmartheap
```

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CPU2006 license: 3175		**Test date:**	May-2014
Test sponsor: Huawei		**Hardware Availability:**	Sep-2013
Tested by: Huawei		**Software Availability:**	Nov-2013

Peak Optimization Flags (Continued)

473.astar: basepeak = yes

483.xalancbmk: `-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias -Wl,-z,muldefs -L/smartheap -lsmartheap`

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-ic12.1-official-linux64.20120425.html
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.0-IVB-RevG.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120425.xml
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.0-IVB-RevG.xml

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

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