SPEC® CINT2006 Result

Dell Inc.

PowerEdge R430 (Intel Xeon E5-2680 v3, 2.50 GHz)

SPECint®_rate2006 = 1060

SPECint_rate_base2006 = 1020

Copies 0 300 600 900 1350 1800 2250 2700 3150 3600 4050 4500 4950 5400 5850 6300 6750 7200 7650 8100 8550 9000 9750

Benchmark	Copies	Peak	Base
400.perlbench	48	989	812
401.bzip2	48	540	518
403.gcc	48		779
429.mcf	48		1360
445.gobmk	48	740	718
456.hmmer	48	1440	1410
458.sjeng	48	790	764
462.libquantum	48		9610
464.h264ref	48	1260	1230
471.omnetpp	48	552	532
473.astar	48		557
483.xalancbmk	48		1090

SPECint_rate_base2006 = 1020

SPECint_rate2006 = 1060

Hardware

CPU Name:	Intel Xeon E5-2680 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 3.30 GHz
CPU MHz:	2500
FPU:	Integrated
CPU(s) enabled:	24 cores, 2 chips, 12 cores/chip, 2 threads/core
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 PC4-2133P-R)
Disk Subsystem:	1 x 300 GB 10000 RPM SAS
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 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

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge R430 (Intel Xeon E5-2680 v3, 2.50 GHz)

SPECint_rate2006 =   1060

SPECint_rate_base2006 = 1020

CPU2006 license: 55
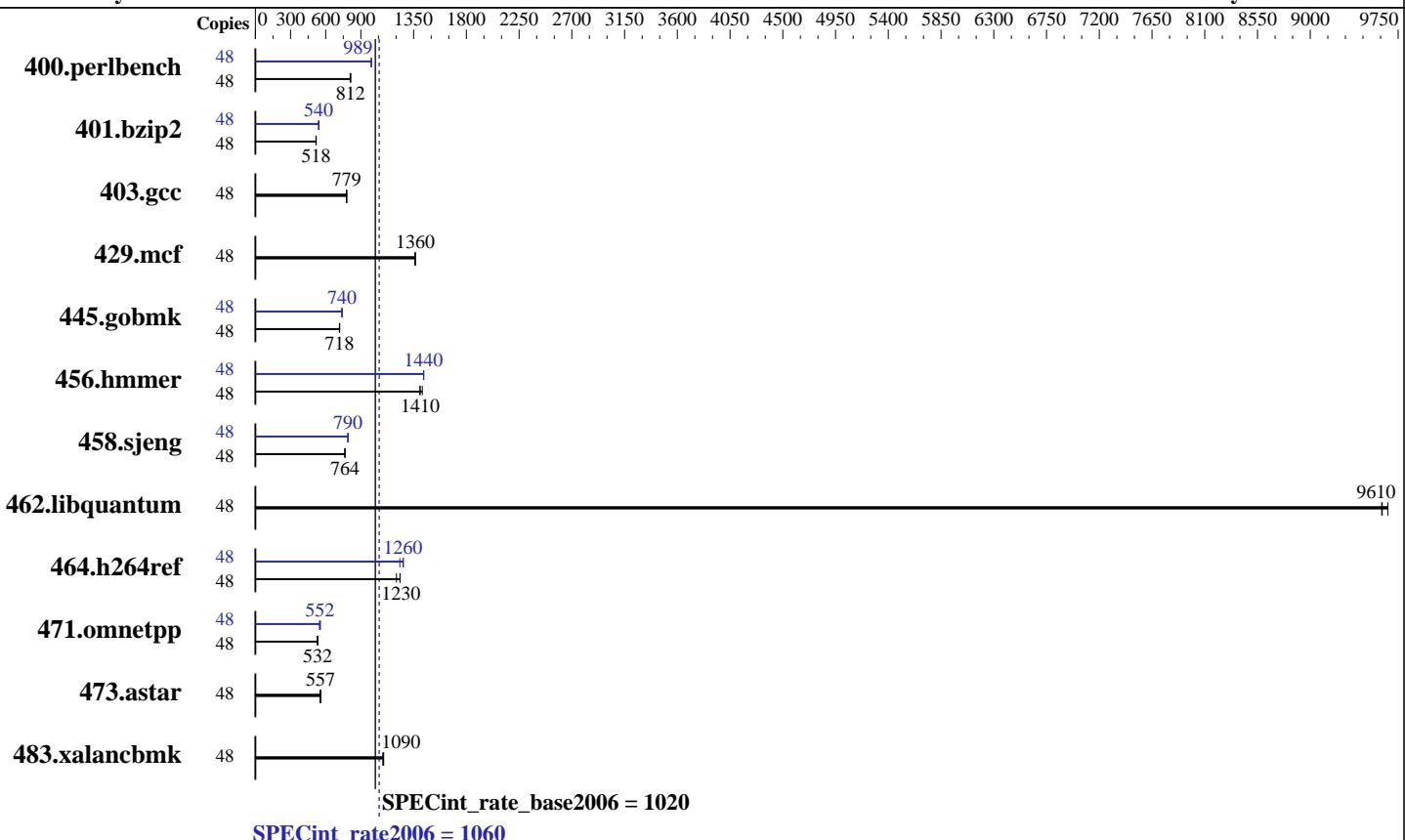**Test sponsor:** Dell Inc.
Tested by: Dell Inc.

Test date: Nov-2014
Hardware Availability: Dec-2014
Software Availability: Jan-2014

Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	48	576	814	580	809	**578**	**812**	48	475	987	474	990	**474**	**989**
401.bzip2	48	896	517	892	519	**895**	**518**	48	855	542	859	539	**858**	**540**
403.gcc	48	**496**	**779**	495	780	498	776	48	**496**	**779**	495	780	498	776
429.mcf	48	321	1360	321	1370	**321**	**1360**	48	321	1360	321	1370	**321**	**1360**
445.gobmk	48	700	719	**701**	**718**	703	716	48	**681**	**740**	680	740	684	737
456.hmmer	48	314	1420	319	1400	**319**	**1410**	48	312	1430	312	1440	**312**	**1440**
458.sjeng	48	**760**	**764**	759	765	761	763	48	**735**	**790**	735	790	736	789
462.libquantum	48	103	9610	103	9660	**103**	**9610**	48	103	9610	103	9660	**103**	**9610**
464.h264ref	48	883	1200	860	1240	**861**	**1230**	48	**843**	**1260**	862	1230	841	1260
471.omnetpp	48	562	534	**564**	**532**	570	526	48	549	546	**543**	**552**	541	554
473.astar	48	611	552	**605**	**557**	604	558	48	611	552	**605**	**557**	604	558
483.xalancbmk	48	**304**	**1090**	304	1090	303	1090	48	**304**	**1090**	304	1090	303	1090

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"

Platform Notes

```
BIOS settings:
Snoop Mode set to Cluster on Die
Virtualization Technology disabled
Execute Disable disabled
System Profile set to Custom
Memory Patrol Scrub set to Disabled
Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Wed Nov  5 09:10:10 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 E5-2680 v3 @ 2.50GHz
      2 "physical id"s (chips)
```

Continued on next page

Dell Inc.

PowerEdge R430 (Intel Xeon E5-2680 v3, 2.50 GHz)

SPECint_rate2006 =   1060

SPECint_rate_base2006 = 1020

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Nov-2014
Hardware Availability: Dec-2014
Software Availability: Jan-2014

Platform Notes (Continued)

```
     48 "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  : 24
      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 : 15360 KB

 From /proc/meminfo
    MemTotal:       132054288 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.localdomain 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 Nov 5 09:09

 SPEC is set to: /root/cpu2006-1.2
    Filesystem     Type  Size  Used Avail Use% Mounted on
    /dev/sda2      ext4  271G  9.7G  248G   4% /

 Additional information from dmidecode:
   BIOS Dell Inc. 1.0.0 10/15/2014
   Memory:
   4x 000000000000 Not Specified   2133 MHz 1 rank
   8x 002C00B3002C 36ASF2G72PZ-2G1A2 16 GB 2133 MHz 2 rank

 (End of data from sysinfo program)
```

General Notes

```
 Environment variables set by runspec before the start of the run:
 LD_LIBRARY_PATH = "/root/cpu2006-1.2/libs/32:/root/cpu2006-1.2/libs/64:/root/cpu2006-1.2/sh"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RedHat EL 6.4
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 Filesystem page cache cleared with:
```

Dell Inc.

PowerEdge R430 (Intel Xeon E5-2680 v3, 2.50 GHz)

SPECint_rate2006 =   1060

SPECint_rate_base2006 = 1020

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Nov-2014
Hardware Availability: Dec-2014
Software Availability: Jan-2014

General Notes (Continued)

```
echo 1>        /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
```

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
```

Dell Inc.

PowerEdge R430 (Intel Xeon E5-2680 v3, 2.50 GHz)

SPECint_rate2006 = 1060

SPECint_rate_base2006 = 1020

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Nov-2014
Hardware Availability: Dec-2014
Software Availability: Jan-2014

Peak Compiler Invocation (Continued)

      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: `-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`

Dell Inc.

PowerEdge R430 (Intel Xeon E5-2680 v3, 2.50 GHz)

SPECint_rate2006 =   1060

SPECint_rate_base2006 = 1020

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Nov-2014
Hardware Availability: Dec-2014
Software Availability: Jan-2014

Peak Optimization Flags (Continued)

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:

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-revC.html
http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revE.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-revC.xml
http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revE.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 Wed Dec 3 10:32:36 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 2 December 2014.