Dell Inc.

PowerEdge FC430 (Intel Xeon E5-2683 v3, 2.00 GHz)

SPECint®2006 = 55.1
SPECint_base2006 = 52.5

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

Operating System: SUSE Linux Enterprise Server 12 3.12.28-4-default
Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux
Auto Parallel: Yes
File System: ext4
System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V10.0

Hardware
CPU Name: Intel Xeon E5-2683 v3
CPU Characteristics: Intel Turbo Boost Technology up to 3.00 GHz
CPU MHz: 2000
FPU: Integrated
CPU(s) enabled: 28 cores, 2 chips, 14 cores/chip, 2 threads/core
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 35 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 200 GB SSD SATA
Other Hardware: None

Software

Software Availability: Apr-2015
Hardware Availability: Apr-2015
Test date: Jan-2015
Dell Inc.
PowerEdge FC430 (Intel Xeon E5-2683 v3, 2.00 GHz)

SPECint2006 = 55.1
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Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Base</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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<tbody>
<tr>
<td>400.perlbench</td>
<td>284</td>
<td>34.4</td>
<td>288</td>
<td>33.9</td>
<td></td>
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<td>401.bzip2</td>
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<td>20.3</td>
<td>474</td>
<td>20.4</td>
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<td>403.gcc</td>
<td>279</td>
<td>28.9</td>
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<td>29.0</td>
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<td>28.9</td>
<td>278</td>
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<tr>
<td>429.mcf</td>
<td>191</td>
<td>47.7</td>
<td>189</td>
<td>48.3</td>
<td></td>
<td>191</td>
<td>48.2</td>
<td>191</td>
<td>47.7</td>
<td>189</td>
<td>48.2</td>
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<tr>
<td>445.gobmk</td>
<td>427</td>
<td>24.6</td>
<td>428</td>
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<td>456.hmmer</td>
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<td>458.sjeng</td>
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<tr>
<td>462.libquantum</td>
<td>3.58</td>
<td>5780</td>
<td>3.57</td>
<td>5810</td>
<td>3.52</td>
<td>5880</td>
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<tr>
<td>464.h264ref</td>
<td>545</td>
<td>40.6</td>
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<td>471.omnetpp</td>
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<td>473.astar</td>
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<td>28.2</td>
<td>251</td>
<td>28.0</td>
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<tr>
<td>483.xalancbmk</td>
<td>128</td>
<td>53.9</td>
<td>130</td>
<td>53.0</td>
<td></td>
<td>133</td>
<td>52.0</td>
<td>123</td>
<td>55.9</td>
<td>126</td>
<td>54.8</td>
</tr>
</tbody>
</table>

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

Submit Notes

The config file option 'submit' was used.

Operating System Notes

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

Platform Notes

BIOS settings:
Snoop Mode set to Home Snoop
Virtualization Technology disabled
System Profile set to Custom
Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on linux-ly8c Wed Jan 21 13:03:48 2015

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 E5-2683 v3 @ 2.00GHz
2 "physical id"s (chips)
56 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

Continued on next page
Dell Inc.

PowerEdge FC430 (Intel Xeon E5-2683 v3, 2.00 GHz)

SPECint2006 = 55.1
SPECint_base2006 = 52.5

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

platform Notes (Continued)

  cpu cores : 14
  siblings : 28
  physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14;
  physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14;
  cache size : 35840 KB

From /proc/meminfo
  MemTotal: 132186916 kB
  HugePages_Total: 0
  Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 12

From /etc/*release* /etc/*version*
  SuSE-release:
    SUSE Linux Enterprise Server 12 (x86_64)
    VERSION = 12
    PATCHLEVEL = 0
    # This file is deprecated and will be removed in a future service pack or
    # release.
    # Please check /etc/os-release for details about this release.
  os-release:
    NAME="SLES"
    VERSION="12"
    VERSION_ID="12"
    PRETTY_NAME="SUSE Linux Enterprise Server 12"
    ID="sles"
    ANSI_COLOR="0;32"
    CPE_NAME="cpe:/o:suse:sles:12"
uname -a:
  Linux linux-ly8c 3.12.28-4-default #1 SMP Thu Sep 25 17:02:34 UTC 2014
  (9879bd4) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jan 21 11:59

SPEC is set to: /root/cpu2006-1.2
  Filesystem Type Size Used Avail Use% Mounted on
  /dev/sda2 ext4 176G 8.6G 166G 5% /

Additional information from dmidecode:

  Warning: Use caution when you interpret this section. The 'dmidecode' program
  reads system data which is "intended to allow hardware to be accurately
  determined", but the intent may not be met, as there are frequent changes to
  hardware, firmware, and the "DMTF SMBIOS" standard.

  BIOS Dell Inc. 0.4.0 01/08/2015
  Memory:
    8x 00CE00B300CE M393A2G40DB0-CPB 16 GB 2 rank 2133 MHz

(End of data from sysinfo program)
**SPEC CINT2006 Result**

**Dell Inc.**

PowerEdge FC430 (Intel Xeon E5-2683 v3, 2.00 GHz)

| SPECint2006  | 55.1 |
| SPECint_base2006 | 52.5 |

**CPU2006 license:** 55  
**Test sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test date:** Jan-2015  
**Hardware Availability:** Apr-2015  
**Software Availability:** Apr-2015

### General Notes

Environment variables set by runspec before the start of the run:
- KMP_AFFINITY = "granularity=fine,scatter"
- LD_LIBRARY_PATH = "/root/cpu2006-1.2/lib32:/root/cpu2006-1.2/lib64:/root/cpu2006-1.2/sh"
- OMP_NUM_THREADS = "28"

*Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0*  
*Transparent Huge Pages enabled with:*  
*echo always > /sys/kernel/mm/transparent_hugepage/enabled*

### Base Compiler Invocation

**C benchmarks:**  
`icc -m64`

**C++ benchmarks:**  
`icpc -m64`

### 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:**  
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

**C++ benchmarks:**  
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32  
-Wl,-z,muldefs -L/sh -lsmartheap64
## SPEC CINT2006 Result

**Dell Inc.**
PowerEdge FC430 (Intel Xeon E5-2683 v3, 2.00 GHz)

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**SPECint2006 =** 55.1
**SPECint_base2006 =** 52.5

### Base Other Flags

C benchmarks:

- 403.gcc: -Dalloca=_alloca

### Peak Compiler Invocation

C benchmarks (except as noted below):

- `icc -m64`

  - 400.perlbench: `icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32`

C++ benchmarks (except as noted below):

- `icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32`

  - 473.astar: `icpc -m64`

### Peak Portability Flags

- 400.perlbench: `-DSPEC_CPU_LINUX_IA32`
- 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`
- 473.astar: `-DSPEC_CPU_LP64`
- 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) -opt-prefetch -ansi-alias`

- 401.bzip2: `-xCORE-AVX2(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: basepeak = yes
SPEC CINT2006 Result

Dell Inc.
PowerEdge FC430 (Intel Xeon E5-2683 v3, 2.00 GHz)  

SPECint2006 = 55.1
SPECint_base2006 = 52.5

Peak Optimization Flags (Continued)

429.mcf: basepeak = yes
445.gobmk: basepeak = yes
456.hmmer: basepeak = yes

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll4

462.libquantum: basepeak = yes
464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-ra-region-strategy=block -ansi-alias
-Wl,-z,muldefs -L/sh -lsmartheap

473.astar: -xCORE-AVX2 -ipo -03 -no-prec-div -opt-prefetch
-auto-p32 -Wl,-z,muldefs -L/sh -lsmartheap64

483.xalancbmk: -xCORE-AVX2 -ipo -03 -no-prec-div -opt-prefetch
-ansi-alias -Wl,-z,muldefs -L/sh -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-ic15.0-official-linux64.html
http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revD.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revD.xml
## SPEC CINT2006 Result

**Dell Inc.**

**PowerEdge FC430 (Intel Xeon E5-2683 v3, 2.00 GHz)**

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

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