Fujitsu
PRIMERGY BX2580 M2, Intel Xeon E5-2643 v4, 3.40 GHz

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Jul-2016
Hardware Availability: Apr-2016
Software Availability: Sep-2015

400.perlbench 43.3
401.bzip2 39.3
403.gcc 70.7
429.mcf 70.7
445.gobmk 31.8
456.hmmer 36.8
458.sjeng 36.8
462.libquantum 38.2
464.h264ref 45.3
471.omnetpp 38.7
473.astar 43.3
483.xalancbmk 31.9

SPECint2006 = 71.7
SPECint_base2006 = 68.3

Hardware:
CPU Name: Intel Xeon E5-2643 v4
CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz
CPU MHz: 3400
FPU: Integrated
CPU(s) enabled: 12 cores, 2 chips, 6 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: 20 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2400T-R)
Disk Subsystem: 1 x SATA, 1000 GB, 7200 RPM
Other Hardware: None

Software:
Operating System: SUSE Linux Enterprise Server 12 SP1 (x86_64)
Kernel 3.12.49-11-default
Compiler: C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux
Auto Parallel: Yes
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V10.2
Fujitsu

PRIMERGY BX2580 M2, Intel Xeon E5-2643 v4, 3.40 GHz

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

SPECint2006 = 71.7
SPECint_base2006 = 68.3

Test date: Jul-2016
Hardware Availability: Apr-2016
Software Availability: Sep-2015

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>225</td>
<td>43.3</td>
<td>225</td>
<td>43.3</td>
<td>224</td>
<td>43.5</td>
<td>206</td>
<td>47.4</td>
<td>206</td>
<td>47.5</td>
<td>206</td>
<td>47.5</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>362</td>
<td>26.6</td>
<td>361</td>
<td>26.8</td>
<td>361</td>
<td>26.7</td>
<td>355</td>
<td>27.2</td>
<td>355</td>
<td>27.2</td>
<td>355</td>
<td>27.2</td>
</tr>
<tr>
<td>403.gcc</td>
<td>205</td>
<td>39.3</td>
<td>205</td>
<td>39.3</td>
<td>206</td>
<td>39.0</td>
<td>205</td>
<td>39.3</td>
<td>205</td>
<td>39.3</td>
<td>206</td>
<td>39.0</td>
</tr>
<tr>
<td>429.mcf</td>
<td>129</td>
<td>70.8</td>
<td>129</td>
<td>70.7</td>
<td>130</td>
<td>70.1</td>
<td>129</td>
<td>70.8</td>
<td>129</td>
<td>70.7</td>
<td>130</td>
<td>70.1</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>330</td>
<td>31.8</td>
<td>330</td>
<td>31.8</td>
<td>331</td>
<td>31.7</td>
<td>330</td>
<td>31.8</td>
<td>330</td>
<td>31.8</td>
<td>331</td>
<td>31.7</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>103</td>
<td>90.5</td>
<td>103</td>
<td>90.5</td>
<td>103</td>
<td>90.2</td>
<td>103</td>
<td>90.5</td>
<td>103</td>
<td>90.5</td>
<td>103</td>
<td>90.2</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>332</td>
<td>36.5</td>
<td>332</td>
<td>36.5</td>
<td>332</td>
<td>36.4</td>
<td>328</td>
<td>36.8</td>
<td>329</td>
<td>36.8</td>
<td>329</td>
<td>36.8</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>4.09</td>
<td>5060</td>
<td>4.15</td>
<td>5000</td>
<td>4.15</td>
<td>4990</td>
<td>4.09</td>
<td>5060</td>
<td>4.15</td>
<td>5000</td>
<td>4.15</td>
<td>4990</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>350</td>
<td>63.2</td>
<td>350</td>
<td>63.2</td>
<td>350</td>
<td>63.2</td>
<td>350</td>
<td>63.2</td>
<td>351</td>
<td>63.0</td>
<td>350</td>
<td>63.2</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>196</td>
<td>31.9</td>
<td>196</td>
<td>31.8</td>
<td>196</td>
<td>32.0</td>
<td>138</td>
<td>45.3</td>
<td>138</td>
<td>45.3</td>
<td>140</td>
<td>44.8</td>
</tr>
<tr>
<td>473.astar</td>
<td>181</td>
<td>38.7</td>
<td>181</td>
<td>38.8</td>
<td>182</td>
<td>38.6</td>
<td>181</td>
<td>38.7</td>
<td>181</td>
<td>38.8</td>
<td>182</td>
<td>38.6</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>88.3</td>
<td>78.1</td>
<td>88.1</td>
<td>78.3</td>
<td>88.2</td>
<td>78.2</td>
<td>79.5</td>
<td>86.8</td>
<td>79.1</td>
<td>87.4</td>
<td>78.5</td>
<td>87.9</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 configuration:
Energy Performance = Performance
Utilization Profile = Unbalanced
QPI snoop mode: Home Directory Snoop with OSB
COD Enable = Disabled, Early Snoop = Disabled, Home Snoop Dir OSB = Enabled
CPU C1E Support = Disabled
Sysinfo program /home/SPECcpu2006/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on linux-rzz5 Tue Jul 26 11:50:35 2016

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 E5-2643 v4 @ 3.40GHz
  2 "physical id"s (chips)
  24 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The Continued on next page
Fujitsu
PRIMERGY BX2580 M2, Intel Xeon E5-2643 v4, 3.40 GHz

SPEC CINT2006 Result

SPECint2006 = 71.7
SPECint_base2006 = 68.3

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Jul-2016
Hardware Availability: Apr-2016
Software Availability: Sep-2015

Platform Notes (Continued)

following excerpts from /proc/cpuinfo might not be reliable. Use with caution.

- cpu cores : 6
- siblings : 12
- physical 0: cores 0 1 2 3 6 7
- physical 1: cores 0 1 2 3 6 7
- cache size : 20480 KB

From /proc/meminfo
- MemTotal: 264518436 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
- SUSE Linux Enterprise Server 12 SP1

From /etc/*release* /etc/*version*
- SuSE-release:
  - NAME="SLES"
  - VERSION="12-SP1"
  - VERSION_ID="12.1"
  - PRETTY_NAME="SUSE Linux Enterprise Server 12 SP1"
  - ID="sles"
  - ANSI_COLOR="0;32"
  - CPE_NAME="cpe:/o:suse:sles:12:sp1"

uname -a:
- Linux linux-rzz5 3.12.49-11-default #1 SMP Wed Nov 11 20:52:43 UTC 2015 (8d714a0) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jul 26 11:50

SPEC is set to: /home/SPECcpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda3 xfs 331G 36G 296G 11% /home

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 FUJITSU // American Megatrends Inc. V5.0.0.11 R1.4.0 for D3321-B1x 03/17/2016
Memory:

Continued on next page
SPECint2006 = 71.7
SPECint_base2006 = 68.3

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

General Notes
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/home/SPECcpu2006/libs/32:/home/SPECcpu2006/libs/64:/home/SPECcpu2006/sh"
OMP_NUM_THREADS = "12"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled
For information about Fujitsu please visit: http://www.fujitsu.com

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

Continued on next page
SPEC CINT2006 Result

Fujitsu
PRIMERGY BX2580 M2, Intel Xeon E5-2643 v4, 3.40 GHz

SPECint2006 = 71.7
SPECint_base2006 = 68.3

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Jul-2016
Hardware Availability: Apr-2016
Software Availability: Sep-2015

Base Optimization Flags (Continued)

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh -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 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin

C++ benchmarks (except as noted below):
icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin
473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -D_FILE_OFFSET_BITS=64 -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
471.omnetpp: -D_FILE_OFFSET_BITS=64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

Continued on next page
Fujitsu
PRIMERGY BX2580 M2, Intel Xeon E5-2643 v4, 3.40 GHz

SPECint2006 = 71.7
SPECint_base2006 = 68.3

CPU2006 license: 19
Test date: Jul-2016
Test sponsor: Fujitsu
Hardware Availability: Apr-2016
Tested by: Fujitsu
Software Availability: Sep-2015

Peak Optimization Flags (Continued)

400.perlbench: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
            -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
            -par-num-threads=1(pass 1) -prof-use(pass 2) -opt-prefetch
            -ansi-alias

401.bzip2: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
            -ipo(pass 2) -O3(pass 2) -no-prec-div
            -par-num-threads=1(pass 1) -prof-use(pass 2) -auto-ilp32
            -opt-prefetch -ansi-alias

403.gcc: basepeak = yes

429.mcf: -xCORE-AVX2 -ipo -O3 -no-prec-div -parallel
            -opt-prefetch -auto-p32

445.gobmk: basepeak = yes

456.hmmer: basepeak = yes

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
            -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
            -par-num-threads=1(pass 1) -prof-use(pass 2) -unroll14

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
            -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
            -par-num-threads=1(pass 1) -prof-use(pass 2)
            -opt-ra-region-strategy=block -ansi-alias
            -Wl,-z,muldefs -L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
            -ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca
Fujitsu

PRIMERGY BX2580 M2, Intel Xeon E5-2643 v4, 3.40 GHz

SPECint2006 = 71.7
SPECint_base2006 = 68.3

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Jul-2016
Hardware Availability: Apr-2016
Software Availability: Sep-2015

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.html
http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-BDW-RevB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-BDW-RevB.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 Tue Sep 6 16:56:33 2016 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 6 September 2016.