Fujitsu

PRIMERGY BX2580 M2, Intel Xeon E5-2697 v4, 2.30 GHz

SPECint®2006 = 73.0
SPECint_base2006 = 70.9

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

Hardware

CPU Name: Intel Xeon E5-2697 v4
CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
CPU MHz: 2300
FPU: Integrated
CPU(s) enabled: 36 cores, 2 chips, 18 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: 45 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

Operating System: SUSE Linux Enterprise Server 12 SP1 (x86_64)
Compiler: 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
SPEC CINT2006 Result

Fujitsu
PRIMERGY BX2580 M2, Intel Xeon E5-2697 v4, 2.30 GHz

SPECint2006 = 73.0
SPECint_base2006 = 70.9

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>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>235</td>
<td>41.6</td>
<td>235</td>
<td>41.5</td>
<td>234</td>
<td>41.7</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>383</td>
<td>25.2</td>
<td>383</td>
<td>25.2</td>
<td>382</td>
<td>25.2</td>
</tr>
<tr>
<td>403.gcc</td>
<td>211</td>
<td>38.1</td>
<td>212</td>
<td>38.0</td>
<td>212</td>
<td>38.0</td>
</tr>
<tr>
<td>429.mcf</td>
<td>142</td>
<td>64.3</td>
<td>142</td>
<td>64.3</td>
<td>147</td>
<td>62.1</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>341</td>
<td>30.8</td>
<td>341</td>
<td>30.8</td>
<td>340</td>
<td>30.8</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>107</td>
<td>87.5</td>
<td>107</td>
<td>87.5</td>
<td>107</td>
<td>87.4</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>337</td>
<td>35.9</td>
<td>337</td>
<td>35.9</td>
<td>337</td>
<td>35.9</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>2.60</td>
<td>7960</td>
<td>2.58</td>
<td>8030</td>
<td>2.67</td>
<td>7770</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>382</td>
<td>58.0</td>
<td>382</td>
<td>57.9</td>
<td>382</td>
<td>58.0</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>326</td>
<td>49.7</td>
<td>125</td>
<td>49.8</td>
<td>126</td>
<td>49.8</td>
</tr>
<tr>
<td>473.astar</td>
<td>188</td>
<td>37.3</td>
<td>189</td>
<td>37.2</td>
<td>190</td>
<td>37.0</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>87.6</td>
<td>78.8</td>
<td>90.5</td>
<td>76.3</td>
<td>89.8</td>
<td>76.8</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 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 CIE Support = Disabled
Sysinfo program /home/SPECcpu2006/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 $$ e3fbb8667b5a285932ceab81e28219e1
running on linux-vaud Mon Jun 27 10:56:42 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 E5-2697 v4 @ 2.30GHz
  2 "physical id"s (chips)
    72 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The Continued on next page
**Platform Notes (Continued)**

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

- cpu cores : 18
- siblings : 36
- physical 0: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
- physical 1: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
- cache size : 46080 KB

From /proc/meminfo

MemTotal: 264312540 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:

(8d714a0) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jun 27 10:56 last=5

SPEC is set to: /home/SPECcpu2006

Filesystem Type Size Used Avail Use% Mounted on
/dev/sda3 xfs 331G 130G 201G 40% /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 R1.3.0 for D3321-B1x
02/19/2016
Memory:
**SPEC CINT2006 Result**

**Fujitsu**

PRIMERGY BX2580 M2, Intel Xeon E5-2697 v4, 2.30 GHz

| SPECint2006 | 73.0 |
| SPECint_base2006 | 70.9 |

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

**Test date:** Jun-2016  
**Hardware Availability:** Apr-2016  
**Software Availability:** Sep-2015

**Platform Notes (Continued)**

16x Micron Technology 36ASF2G72PZ-2G3A3 16 GB 2 rank 2400 MHz

(End of data from sysinfo program)

**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 = "36"

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
Fujitsu

PRIMERGY BX2580 M2, Intel Xeon E5-2697 v4, 2.30 GHz

SPECint2006 = 73.0
SPECint_base2006 = 70.9

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

Test date: Jun-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 E5-2697 v4, 2.30 GHz

SPECint2006 = 73.0
SPECint_base2006 = 70.9

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

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: -xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc
-opt-malloc-options=3 -auto-ilp32

429.mcf: basepeak = yes

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
# SPEC CINT2006 Result

**Fujitsu**

PRIMERGY BX2580 M2, Intel Xeon E5-2697 v4, 2.30 GHz

| SPECint2006 = | 73.0 |
| SPECint_base2006 = | 70.9 |

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

| Test date: | Jun-2016 |
| Hardware Availability: | Apr-2016 |
| Software Availability: | Sep-2015 |

The flags files that were used to format this result can be browsed at:


You can also download the XML flags sources by saving the following links:

- [http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-BDW-RevB.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.  
Originally published on 23 August 2016.