Fujitsu
PRIMERGY CX2550 M2, Intel Xeon E5-2697 v4, 2.30 GHz

SPECint®2006 = 72.8
SPECint_base2006 = 70.8

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

Operating System: SUSE Linux Enterprise Server 12 SP1 (x86_64)
Compiler: C++: Version 16.0.0.101 of Intel C++ Studio XE
Software Availability: Sep-2015

FPU:
Integrated

CPU Characteristics:
Intel Turbo Boost Technology up to 3.60 GHz

CPU(s) enabled:
36 cores, 2 chips, 18 cores/chip, 2 threads/core

CPU MHZ:
2300

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

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

Hardware

Software
SPEC CINT2006 Result

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Results Table

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<td>86.3</td>
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</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 CX2550M2 Mon May 23 08:34:19 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:       264316020 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:
  SUSE Linux Enterprise Server 12 (x86_64)
  VERSION = 12
  PATCHLEVEL = 1
  # 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-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 May 23 08:33 last=5

SPEC is set to: /home/SPECcpu2006
Filesystem     Type  Size  Used Avail Use% Mounted on
/dev/sda3      xfs  890G  130G  760G  15% /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 D3343-B1x 03/17/2016
Memory:

Continued on next page
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Platform Notes (Continued)
16x Hyundai Electronics (Hynix) HMA42GR7AFR4N-UH 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

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## SPEC CINT2006 Result

**Fujitsu**

PRIMERGY CX2550 M2, Intel Xeon E5-2697 v4, 2.30 GHz

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### SPECint2006 = 72.8
### SPECint_base2006 = 70.8

### Base Optimization Flags (Continued)

C++ benchmarks:

-xCORE-AVX2
-ipo
-O3
-no-prec-div
-opt-prefetch
-auto-p32
-Wl,-z,muldefs
-L/sh
-1smartheap64

### 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
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
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -D_FILE_OFFSET_BITS=64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -D_FILE_OFFSET_BITS=64

### Peak Optimization Flags

C benchmarks:

---

Continued on next page
Fujitsu
PRIMERGY CX2550 M2, Intel Xeon E5-2697 v4, 2.30 GHz

SPEC CINT2006 Result

SPECint2006 = 72.8
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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:

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: -Daloca=_alloca
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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)

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

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