



# SPEC® CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

## Fujitsu

PRIMERGY RX2560 M2, Intel Xeon E5-2697 v4, 2.30 GHz

SPECint®2006 = 72.9

SPECint\_base2006 = 70.8

CPU2006 license: 19

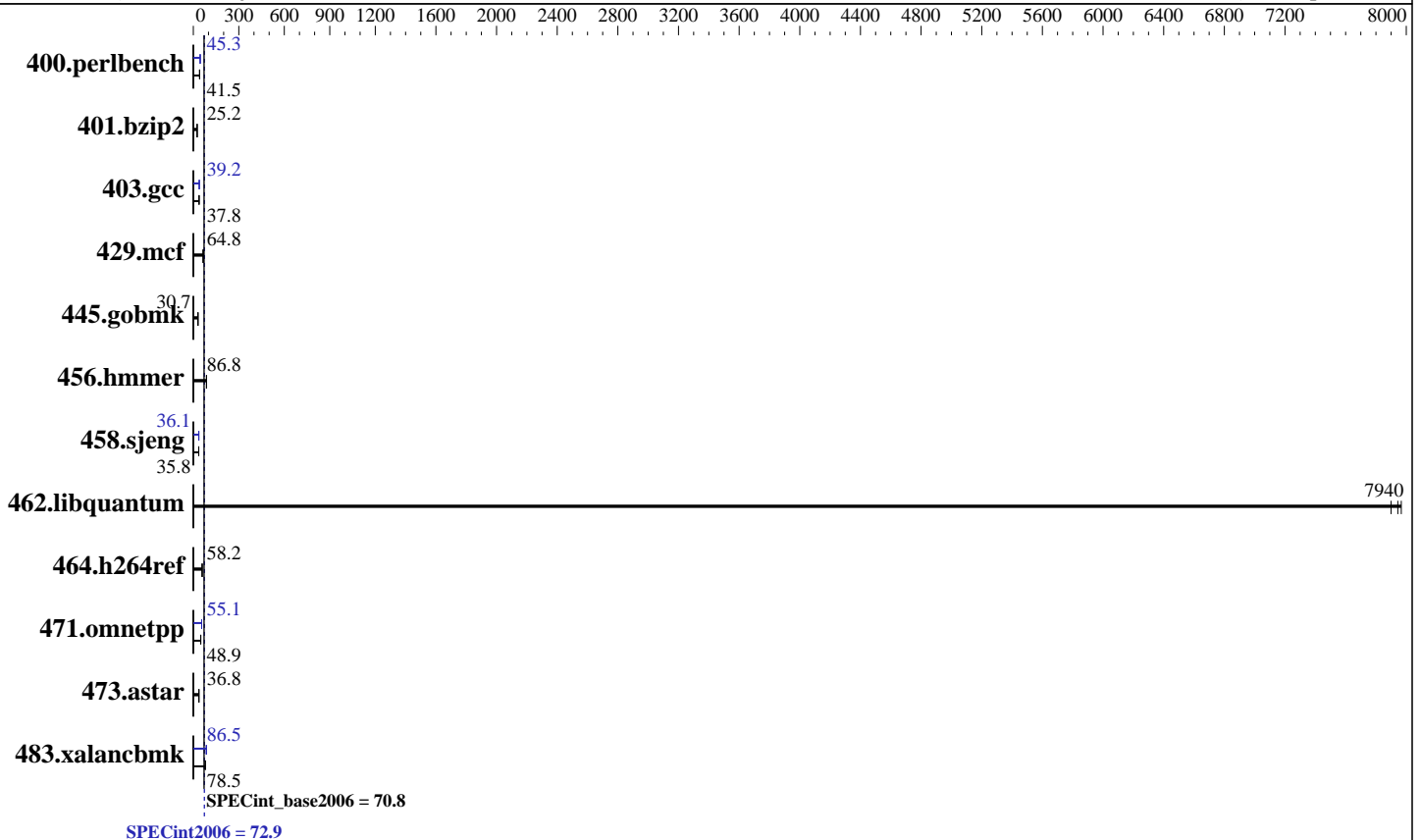
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: May-2016

Hardware Availability: Apr-2016

Software Availability: Sep-2015



### 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, 500 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 5 (multi-user)  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V10.2



# SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

## Fujitsu

PRIMERGY RX2560 M2, Intel Xeon E5-2697 v4, 2.30 GHz

SPECint2006 = **72.9**

SPECint\_base2006 = **70.8**

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

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

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	237	41.2	235	41.6	<u>235</u>	<u>41.5</u>	<u>216</u>	<u>45.3</u>	216	45.3	216	45.2
401.bzip2	383	25.2	386	25.0	<u>383</u>	<u>25.2</u>	383	25.2	386	25.0	<u>383</u>	<u>25.2</u>
403.gcc	213	37.9	213	37.8	<u>213</u>	<u>37.8</u>	206	39.2	205	39.3	<u>205</u>	<u>39.2</u>
429.mcf	141	64.5	<u>141</u>	<u>64.8</u>	140	65.4	141	64.5	<u>141</u>	<u>64.8</u>	140	65.4
445.gobmk	342	30.6	342	30.7	<u>342</u>	<u>30.7</u>	342	30.6	342	30.7	<u>342</u>	<u>30.7</u>
456.hammer	<u>107</u>	<u>86.8</u>	107	87.1	107	86.8	<u>107</u>	<u>86.8</u>	107	87.1	107	86.8
458.sjeng	338	35.8	<u>338</u>	<u>35.8</u>	339	35.7	335	36.2	335	36.1	<u>335</u>	<u>36.1</u>
462.libquantum	2.60	7970	<u>2.61</u>	<u>7940</u>	2.62	7900	2.60	7970	<u>2.61</u>	<u>7940</u>	2.62	7900
464.h264ref	380	58.3	381	58.1	<u>380</u>	<u>58.2</u>	380	58.3	381	58.1	<u>380</u>	<u>58.2</u>
471.omnetpp	128	48.8	<u>128</u>	<u>48.9</u>	128	49.0	<u>113</u>	<u>55.1</u>	114	55.1	113	55.1
473.astar	190	37.0	192	36.5	<u>191</u>	<u>36.8</u>	190	37.0	192	36.5	<u>191</u>	<u>36.8</u>
483.xalancbmk	88.4	78.1	<u>87.8</u>	<u>78.5</u>	87.7	78.7	81.0	85.2	79.8	86.5	<u>79.8</u>	<u>86.5</u>

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 ClE Support = Disabled
Sysinfo program /home/SPECcpu2006/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on RX2560M2 Thu May 12 08:47:39 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

```



# SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

## Fujitsu

PRIMERGY RX2560 M2, Intel Xeon E5-2697 v4, 2.30 GHz

SPECint2006 = 72.9

SPECint\_base2006 = 70.8

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

Test date: May-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 : 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:      264313116 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:
Linux RX2560M2 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 5 May 12 08:46
```

```
SPEC is set to: /home/SPECcpu2006
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda3        xfs   1.8T  4.0G  1.8T   1% /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 R1.6.0 for D3289-B1x  
03/11/2016

Memory:

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

**Fujitsu**

PRIMERGY RX2560 M2, Intel Xeon E5-2697 v4, 2.30 GHz

**SPECint2006 = 72.9**

**SPECint\_base2006 = 70.8**

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

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

## Platform Notes (Continued)

16x Hynix Semiconductor HMA42GR7AFR4N-UH 16 GB 2 rank 2400 MHz  
8x NO DIMM NO DIMM

(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.hmmmer: -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

Copyright 2006-2016 Standard Performance Evaluation Corporation

**Fujitsu**

PRIMERGY RX2560 M2, Intel Xeon E5-2697 v4, 2.30 GHz

**SPECint2006 = 72.9**

**SPECint\_base2006 = 70.8**

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

Test date: May-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.hmmmer: -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



# SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

**Fujitsu**

PRIMERGY RX2560 M2, Intel Xeon E5-2697 v4, 2.30 GHz

**SPECint2006 = 72.9**

**SPECint\_base2006 = 70.8**

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

**Test date:** May-2016  
**Hardware Availability:** Apr-2016  
**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: basepeak = yes

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) -unroll4

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 -lsmarheap

473.astar: basepeak = yes

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

## 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-ic16.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.html>



# SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

**Fujitsu**

PRIMERGY RX2560 M2, Intel Xeon E5-2697 v4, 2.30 GHz

**SPECint2006 = 72.9**

**SPECint\_base2006 = 70.8**

**CPU2006 license:** 19

**Test sponsor:** Fujitsu

**Tested by:** Fujitsu

**Test date:** May-2016

**Hardware Availability:** Apr-2016

**Software Availability:** Sep-2015

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-HSW-RevA.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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Thu Jun 30 14:06:09 2016 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 14 June 2016.