## SPEC® CINT2006 Result

### Huawei

**Huawei RH5885H V3 (Intel Xeon E7-4850 v4)**

<table>
<thead>
<tr>
<th>Test sponsor:</th>
<th>Huawei</th>
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<tbody>
<tr>
<td>Tested by:</td>
<td>Huawei</td>
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</table>

**CPU2006 license:** 3175  
**Test date:** Aug-2016

**Hardware Availability:** Jun-2016  
**Software Availability:** Nov-2015

### Copies

<table>
<thead>
<tr>
<th>Benchmark</th>
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**SPECint_rate_base2006 = 2330**

### SPECint Results

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**SPECint_rate2006 = Not Run**

### Hardware

**CPU Name:** Intel Xeon E7-4850 v4  
**CPU Characteristics:** Intel Turbo Boost Technology up to 2.80 GHz

- **CPU MHz:** 2100
- **FPU:** Integrated
- **CPU(s) enabled:** 64 cores, 4 chips, 16 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:** 40 MB I+D on chip per chip
- **Other Cache:** None
- **Memory:** 512 GB (32 x 16 GB 2Rx4 PC4-2133P-R, running at 1333 MHz)
- **Disk Subsystem:** 2 x 600 GB SAS, 10K RPM
- **Other Hardware:** None

### Software

**Operating System:** Red Hat Enterprise Linux Server release 7.2 (Maipo)  
**Compiler:** C/C++ Version 16.0.0.101 of Intel C++ Studio XE for Linux

- **Auto Parallel:** No
- **File System:** xfs
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 32-bit
- **Peak Pointers:** 32/64-bit
- **Other Software:** Microquill SmartHeap V10.2
### Huawei RH5885H V3 (Intel Xeon E7-4850 v4)

**CPU2006** license: 3175  
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</table>

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

### Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

### Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"  
Turbo mode set with:  
cpupower --c all frequency-set -g performance

### Platform Notes

BIOS configuration:  
Set Power Efficiency Mode to Performance  
Set Lock_step to disabled  
Baseboard Management Controller used to adjust the fan speed to 100%  
Set C-State to C0/C1  
Sysinfo program /home/spec/config/sysinfo.rev6914  

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 E7-4850 v4 @ 2.10GHz  
Continued on next page
Huawei

Huawei RH5885H V3 (Intel Xeon E7-4850 v4)

SPECint_rate2006 = Not Run
SPECint_rate_base2006 = 2330

CPU2006 license: 3175
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Platform Notes (Continued)

4 "physical id"s (chips)
128 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
cautions.)
cpu cores : 16
siblings : 32
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 2: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 3: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
cache size : 20480 KB

From /proc/meminfo
MemTotal: 528069356 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
NAME="Red Hat Enterprise Linux Server"
VERSION="7.2 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.2"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.2 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME=cpe:/o:redhat:enterprise_linux:7.2:GA:server
redhat-release: Red Hat Enterprise Linux Server release 7.2 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.2 (Maipo)

uname -a:
Linux RH5885HV3 3.10.0-327.el7.x86_64 #1 SMP Thu Oct 29 17:29:29 EDT 2015
x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Aug 22 14:41

SPEC is set to: /home/spec
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs 1000G 8.0G 992G 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 American Megatrends Inc. 5.11 02/05/2016
Memory:
64x NO DIMM NO DIMM
32x Samsung M393A2G40DB0-CPB 16 GB 2 rank 2133 MHz, configured at 1333 MHz
**Huawei RH5885H V3 (Intel Xeon E7-4850 v4)**

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### Platform Notes (Continued)

(End of data from `sysinfo` program)

Regarding the `sysinfo` display about the memory installed, the correct amount of memory is 512 GB and the `dmidecode` description should have two lines reading as:

- 64x NO DIMM NO DIMM
- 32x Samsung M393A2G40DB0-CPB 16 GB 2 rank 2133 MHz, configured at 1333 MHz

### General Notes

Environment variables set by `runspec` before the start of the run:

- `LD_LIBRARY_PATH = "/home/spec/libs/32:/home/spec/libs/64:/home/spec/sh"`

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`

Filesystem page cache cleared with:

- `echo 1> /proc/sys/vm/drop_caches`

`runspec` command invoked through `numactl` i.e.:

```
numactl --interleave=all runspec <etc>
```

### Base Compiler Invocation

**C benchmarks:**

```
icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin
```

**C++ benchmarks:**

```
icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin
```

### Base Portability Flags

- `400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32`
- `401.bzip2: -D_FILE_OFFSET_BITS=64`
- `403.gcc: -D_FILE_OFFSET_BITS=64`
- `429.mcf: -D_FILE_OFFSET_BITS=64`
- `445.gobmk: -D_FILE_OFFSET_BITS=64`
- `456.hmmer: -D_FILE_OFFSET_BITS=64`
- `458.sjeng: -D_FILE_OFFSET_BITS=64`
- `462.libquantum: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX`
- `464.h264ref: -D_FILE_OFFSET_BITS=64`
- `471.omnetpp: -D_FILE_OFFSET_BITS=64`
- `473.astar: -D_FILE_OFFSET_BITS=64`
- `483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX`
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**Base Optimization Flags**

- C benchmarks:
  -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
  -opt-mem-layout-trans=3

- C++ benchmarks:
  -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
  -opt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh -lsmartheap

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**Base Other Flags**

- C benchmarks:
  403.gcc: -Dalloca=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:


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

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