



SPEC® CINT2006 Result

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HITACHI

SPECint®_rate2006 = Not Run

Compute Blade 520X (Intel Xeon E7-8890 v3)

SPECint_rate_base2006 = 2740

CPU2006 license: 35

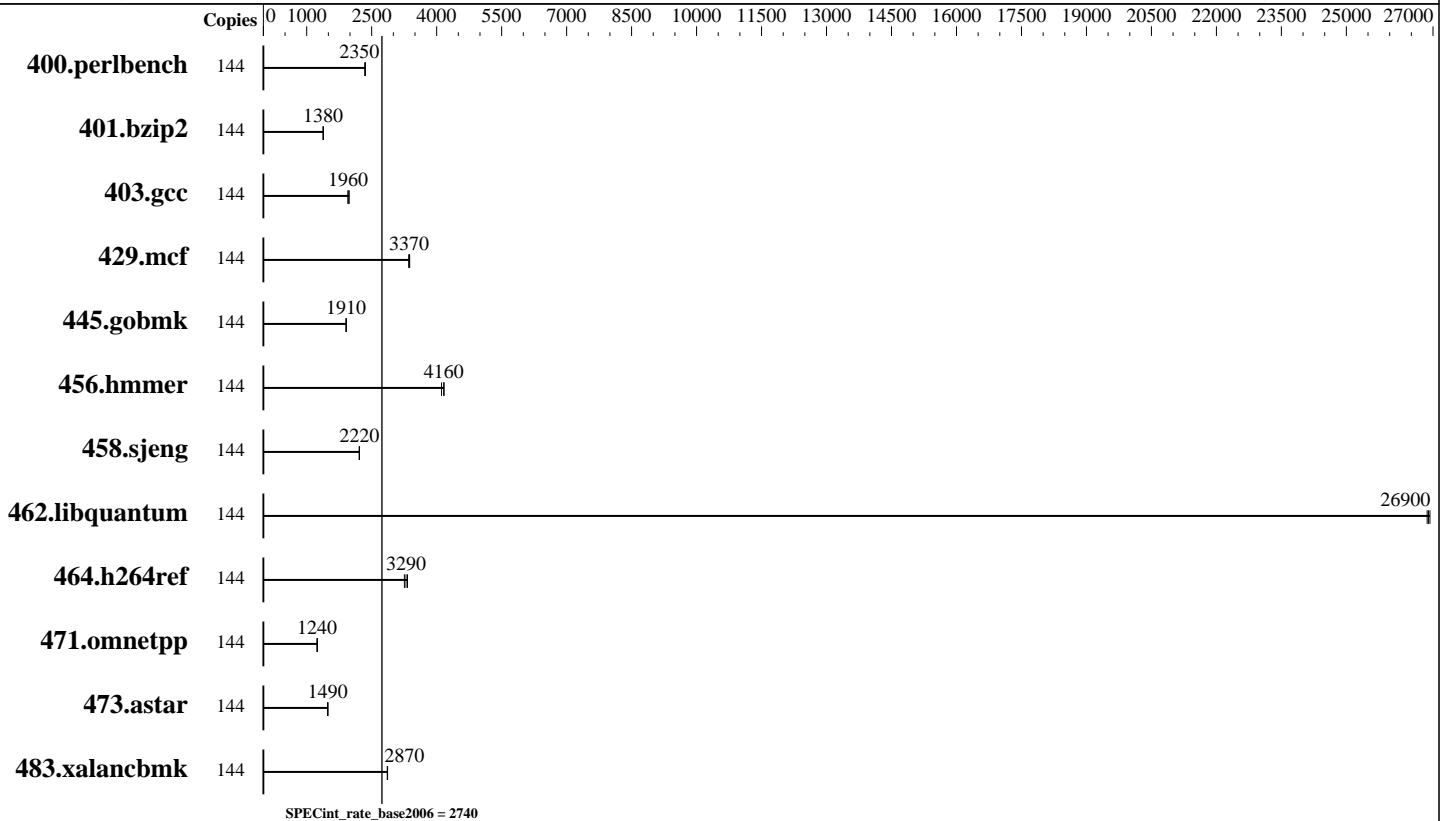
Test sponsor: HITACHI

Tested by: HITACHI

Test date: May-2015

Hardware Availability: Jun-2015

Software Availability: Oct-2014



Hardware

CPU Name: Intel Xeon E7-8890 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz
 CPU MHz: 2500
 FPU: Integrated
 CPU(s) enabled: 72 cores, 4 chips, 18 cores/chip, 2 threads/core
 CPU(s) orderable: 2,4 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: 1 TB (64 x 16 GB 2Rx4 PC4-2133P-R, running at 1600 MHz)
 Disk Subsystem: 2 x 300 GB SAS, 15000 RPM, RAID1
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.6 (Santiago)
 2.6.32-504.el6.x86_64
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
 Auto Parallel: No
 File System: ext4
 System State: Run level 5
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.0



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Results Table

| Benchmark | Base | | | | | | | | Peak | | | | | | | |
|----------------|--------|------------|--------------|-------------|-------------|------------|-------------|--------|---------|-------|---------|-------|---------|-------|--|--|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | | |
| 400.perlbench | 144 | 600 | 2340 | 598 | 2350 | <u>599</u> | <u>2350</u> | | | | | | | | | |
| 401.bzip2 | 144 | 1006 | 1380 | <u>1006</u> | <u>1380</u> | 1006 | 1380 | | | | | | | | | |
| 403.gcc | 144 | 594 | 1950 | 585 | 1980 | <u>592</u> | <u>1960</u> | | | | | | | | | |
| 429.mcf | 144 | <u>390</u> | <u>3370</u> | 389 | 3380 | 391 | 3360 | | | | | | | | | |
| 445.gobmk | 144 | 791 | 1910 | <u>790</u> | <u>1910</u> | 790 | 1910 | | | | | | | | | |
| 456.hammer | 144 | 322 | 4170 | <u>323</u> | <u>4160</u> | 327 | 4110 | | | | | | | | | |
| 458.sjeng | 144 | 788 | 2210 | 785 | 2220 | <u>786</u> | <u>2220</u> | | | | | | | | | |
| 462.libquantum | 144 | <u>111</u> | <u>26900</u> | 111 | 26900 | 111 | 26900 | | | | | | | | | |
| 464.h264ref | 144 | <u>968</u> | <u>3290</u> | 979 | 3250 | 958 | 3330 | | | | | | | | | |
| 471.omnetpp | 144 | 726 | 1240 | 721 | 1250 | <u>726</u> | <u>1240</u> | | | | | | | | | |
| 473.astar | 144 | 680 | 1490 | <u>680</u> | <u>1490</u> | 680 | 1490 | | | | | | | | | |
| 483.xalancbmk | 144 | <u>347</u> | <u>2870</u> | 347 | 2870 | 347 | 2860 | | | | | | | | | |

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"

Platform Notes

BIOS configuration:

C-State = Disable
C1 Enhanced Mode = Disable
Active Energy Manager = Capping Disabled
Platform Controlled Type = Maximum Performance
Memory Power Management = Disable
Patrol Scrub = Disable

Sysinfo program /home/cpu2006/config/sysinfo.rev6818
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191
running on localhost Wed May 13 17:11:30 2015

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

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Platform Notes (Continued)

```

model name : Intel(R) Xeon(R) CPU E7-8890 v3 @ 2.50GHz
  4 "physical id"s (chips)
  144 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
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
  physical 2: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
  physical 3: 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:      1058391176 kB
HugePages_Total:      0
Hugepagesize:    2048 kB

```

```

/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.6 (Santiago)

```

```

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.6 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.6 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

```

```

uname -a:
Linux localhost 2.6.32-504.el6.x86_64 #1 SMP Tue Sep 16 01:56:35 EDT 2014
x86_64 x86_64 x86_64 GNU/Linux

```

run-level 5 May 13 16:10

```

SPEC is set to: /home/cpu2006
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/mapper/vg_rhel6-lv_home
                ext4  221G  4.9G  205G   3% /home

```

```

Additional information from dmidecode:
BIOS HITACHI 09-07 04/28/2015
Memory:
 32x NO DIMM Unknown
 64x Samsung M393A2G40DB0-CPB 16 GB 1600 MHz 2 rank

```

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"

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General Notes (Continued)

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.4
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_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>
 BladeSymphony BS520X, BladeSymphony BS2500 and Hitachi Compute Blade 520X are electronically equivalent.
 The results have been measured on a Hitachi Compute Blade 520X.

Base Compiler Invocation

C benchmarks:
 icc -m32

 C++ benchmarks:
 icpc -m32

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
 462.libquantum: -DSPEC_CPU_LINUX
 483.xalancbmk: -DSPEC_CPU_LINUX

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

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64-revC.html>

<http://www.spec.org/cpu2006/flags/PlatformHitachi-V1.2.20150602.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64-revC.xml>

<http://www.spec.org/cpu2006/flags/PlatformHitachi-V1.2.20150602.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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