SPEC® CINT2006 Result
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HITACHI

BladeSymphony BS2500 (Intel Xeon E7-8890 v3)

$SPECint^®\_rate2006 =$ Not Run
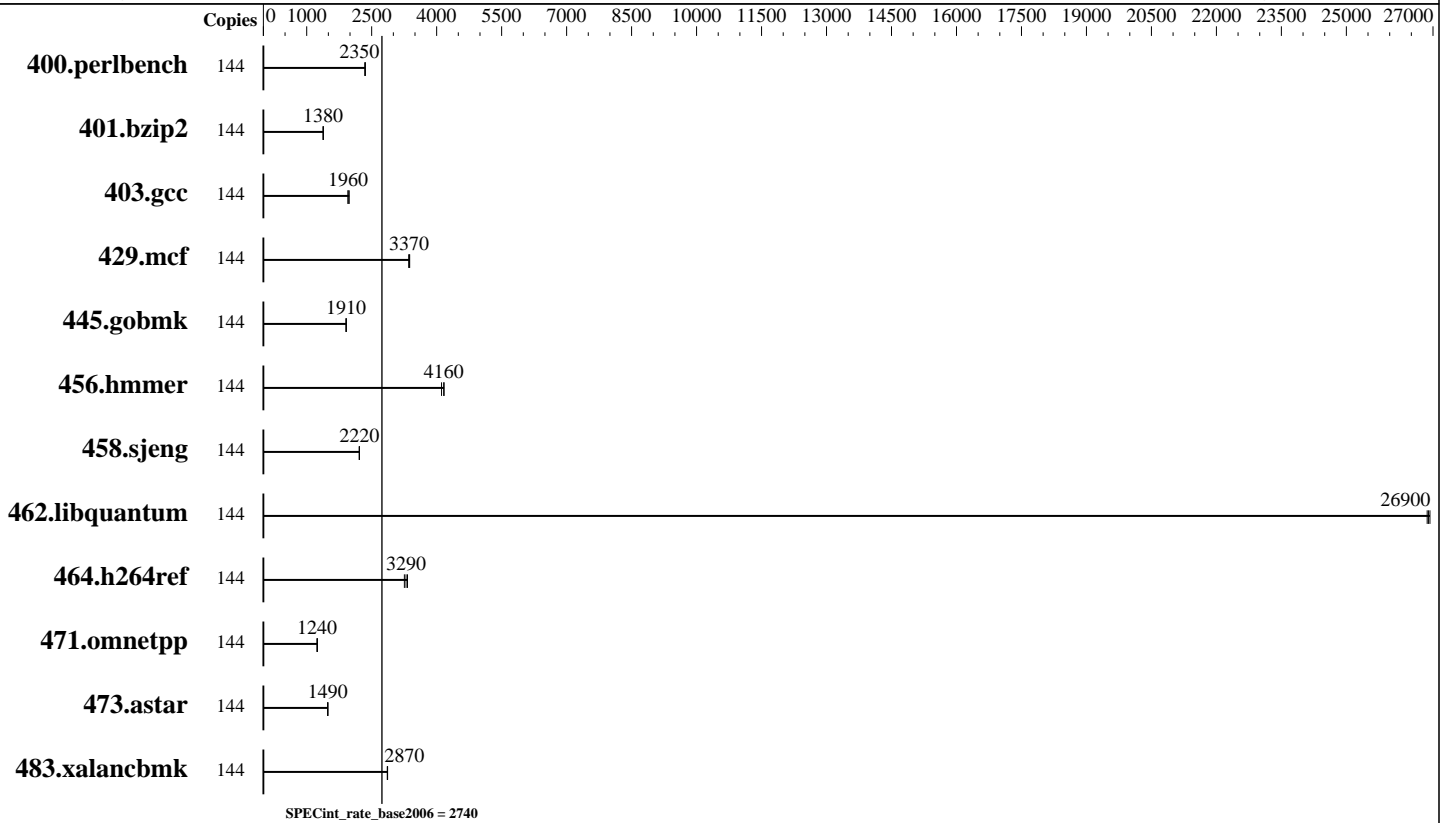
SPECint_rate_base2006 = 2740

CPU2006 license: 35
Test sponsor: HITACHI
Tested by: HITACHI

Test date: May-2015
Hardware Availability: Jun-2015
Software Availability: Oct-2014

Benchmark	Copies	Result
400.perlbench	144	2350
401.bzip2	144	1380
403.gcc	144	1960
429.mcf	144	3370
445.gobmk	144	1910
456.hmmer	144	4160
458.sjeng	144	2220
462.libquantum	144	26900
464.h264ref	144	3290
471.omnetpp	144	1240
473.astar	144	1490
483.xalancbmk	144	2870

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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: 1,2,3,4 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	Copies	Base Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Peak Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	144	600	2340	598	2350	**599**	**2350**							
401.bzip2	144	1006	1380	**1006**	**1380**	1006	1380							
403.gcc	144	594	1950	585	1980	**592**	**1960**							
429.mcf	144	**390**	**3370**	389	3380	391	3360							
445.gobmk	144	791	1910	**790**	**1910**	790	1910							
456.hmmer	144	322	4170	**323**	**4160**	327	4110							
458.sjeng	144	788	2210	785	2220	**786**	**2220**							
462.libquantum	144	**111**	**26900**	111	26900	111	26900							
464.h264ref	144	**968**	**3290**	979	3250	958	3330							
471.omnetpp	144	726	1240	721	1250	**726**	**1240**							
473.astar	144	680	1490	**680**	**1490**	680	1490							
483.xalancbmk	144	**347**	**2870**	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

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

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