SPEC® CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Wipro Limited
NetPower Z2263

$SPECint^{®}\_rate2006 =$ 646
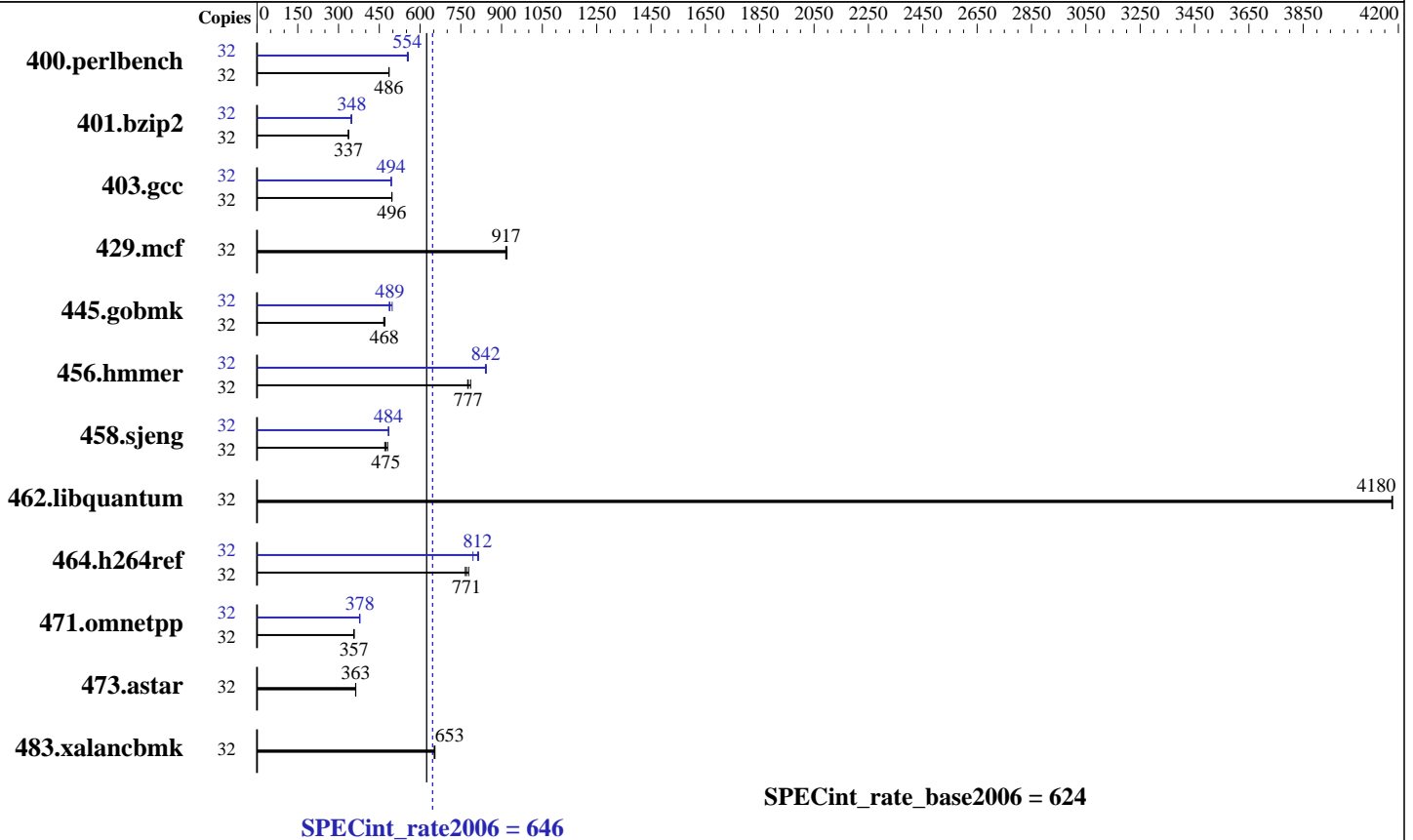
$SPECint\_rate\_base2006 =$ 624

CPU2006 license: 937
Test sponsor: Wipro Limited
Tested by: Wipro Limited

Test date: Jul-2013
Hardware Availability: Jun-2013
Software Availability: Jun-2013

SPECint_rate_base2006 = 624

SPECint_rate2006 = 646

Hardware

CPU Name:	Intel Xeon E5-2670
CPU Characteristics:	Intel Turbo Boost Technology up to 3.30 GHz
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	16 cores, 2 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable:	2 Chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	20 MB I+D on chip per chip
Other Cache:	None
Memory:	128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem:	1 X 500 GB 7.2K SATA3
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.3 (Santiago) 2.6.32-279.el6.x86_64
Compiler:	C/C++: Version 13.0.0.133 of Intel C++ Studio XE for Linux
Auto Parallel:	No
File System:	ext4
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V10.0

SPEC CINT2006 Result

Wipro Limited
NetPower Z2263

SPECint_rate2006 = 646

SPECint_rate_base2006 = 624

CPU2006 license: 937
Test sponsor: Wipro Limited
Tested by: Wipro Limited

Test date: Jul-2013
Hardware Availability: Jun-2013
Software Availability: Jun-2013

Results Table

Benchmark	Copies	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Copies	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
400.perlbench	32	644	485	643	486	**644**	**486**	32	565	553	**564**	**554**	561	557
401.bzip2	32	915	337	**917**	**337**	919	336	32	**887**	**348**	886	348	893	346
403.gcc	32	**519**	**496**	519	497	519	496	32	**522**	**494**	522	494	521	495
429.mcf	32	317	920	**318**	**917**	319	915	32	317	920	**318**	**917**	319	915
445.gobmk	32	720	466	**717**	**468**	713	471	32	690	486	**687**	**489**	675	497
456.hmmer	32	385	775	380	786	**384**	**777**	32	354	844	355	841	**355**	**842**
458.sjeng	32	**816**	**475**	806	481	823	470	32	801	484	**800**	**484**	799	485
462.libquantum	32	159	4180	159	4180	**159**	**4180**	32	159	4180	159	4180	**159**	**4180**
464.h264ref	32	**919**	**771**	909	779	924	766	32	869	815	**872**	**812**	891	795
471.omnetpp	32	560	357	**560**	**357**	561	357	32	530	377	**529**	**378**	529	378
473.astar	32	619	363	**618**	**363**	618	363	32	619	363	**618**	**363**	618	363
483.xalancbmk	32	**338**	**653**	338	652	337	655	32	**338**	**653**	338	652	337	655

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

```
    Sysinfo program /root/bench/cpu2006/config/sysinfo.rev6818
    $Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
    running on localhost.localdomain Wed Jul  3 12:39:44 2013

    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 E5-2670 0 @ 2.60GHz
          2 "physical id"s (chips)
          32 "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 : 8
          siblings  : 16
```

Continued on next page

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Wipro Limited
NetPower Z2263

SPECint_rate2006 =   646

SPECint_rate_base2006 =   624

CPU2006 license: 937
Test sponsor: Wipro Limited
Tested by: Wipro Limited

Test date: Jul-2013
Hardware Availability: Jun-2013
Software Availability: Jun-2013

Platform Notes (Continued)

```
     physical 0: cores 0 1 2 3 4 5 6 7
     physical 1: cores 0 1 2 3 4 5 6 7
   cache size : 20480 KB

From /proc/meminfo
   MemTotal:        132204288 kB
   HugePages_Total:         0
   Hugepagesize:         2048 kB

/usr/bin/lsb_release -d
   Red Hat Enterprise Linux Server release 6.3 (Santiago)

From /etc/*release* /etc/*version*
   redhat-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
   system-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
   system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
   Linux localhost.localdomain 2.6.32-279.el6.x86_64 #1 SMP Wed Jun 13 18:24:36
   EDT 2012 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jul 3 12:39 last=5

SPEC is set to: /root/bench/cpu2006
   Filesystem     Type     Size  Used Avail Use% Mounted on
   /dev/sda3      ext4     439G   17G  400G   5% /

Additional information from dmidecode:
  BIOS American Megatrends Inc. 2.0a 03/27/2013
  Memory:
   16x    8 GB
   14x Hynix Semiconducto HMT31GR7CFR4C 8 GB 1600 MHz 1 rank
   2x Hynix Semiconductor HMT31GR7CFR4C- 8 GB 1600 MHz 1 rank

(End of data from sysinfo program)
Regarding the sysinfo display about the memory installed, the correct amount of
memory is 128 GB and the dmidecode description should have one line reading as:
   16x Hynix Semiconductor HMT31GR7CFR4C 8 GB 1600 MHz 2 rank
```

General Notes

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

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RHEL5.5
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.:
```

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Wipro Limited
NetPower Z2263

SPECint_rate2006 =   646

SPECint_rate_base2006 = 624

CPU2006 license: 937
Test sponsor: Wipro Limited
Tested by: Wipro Limited

Test date: Jul-2013
Hardware Availability: Jun-2013
Software Availability: Jun-2013

General Notes (Continued)

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

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:
```
    -xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
```

C++ benchmarks:
```
    -xAVX -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
```

Peak Compiler Invocation

C benchmarks (except as noted below):
```
    icc  -m32
```

```
    400.perlbench: icc -m64
```

```
     401.bzip2: icc -m64
```

```
    456.hmmer: icc -m64
```

Wipro Limited
NetPower Z2263

SPECint_rate2006 =   646

SPECint_rate_base2006 =   624

CPU2006 license: 937

Test sponsor: Wipro Limited

Tested by: Wipro Limited

Test date: Jul-2013

Hardware Availability: Jun-2013

Software Availability: Jun-2013

Peak Compiler Invocation (Continued)

         458.sjeng: `icc -m64`

C++ benchmarks:
     `icpc -m32`

Peak Portability Flags

     400.perlbench: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64`
         401.bzip2: `-DSPEC_CPU_LP64`
         456.hmmer: `-DSPEC_CPU_LP64`
         458.sjeng: `-DSPEC_CPU_LP64`
     462.libquantum: `-DSPEC_CPU_LINUX`
     483.xalancbmk: `-DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

     400.perlbench: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
                    `-no-prec-div(pass 2) -prof-use(pass 2) -auto-ilp32`

         401.bzip2: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
                    `-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch`
                    `-auto-ilp32 -ansi-alias`

           403.gcc: `-xAVX -ipo -O3 -no-prec-div`

           429.mcf: `basepeak = yes`

         445.gobmk: `-xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)`
                    `-ansi-alias -opt-mem-layout-trans=3`

         456.hmmer: `-xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilp32`

         458.sjeng: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
                    `-no-prec-div(pass 2) -prof-use(pass 2) -unroll4`
                    `-auto-ilp32`

     462.libquantum: `basepeak = yes`

         464.h264ref: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)`
                      `-no-prec-div(pass 2) -prof-use(pass 2) -unroll2`
                      `-ansi-alias`

C++ benchmarks:

Wipro Limited
NetPower Z2263

SPECint_rate2006 =   646

SPECint_rate_base2006 = 624

CPU2006 license: 937

Test sponsor: Wipro Limited

Tested by: Wipro Limited

Test date: Jul-2013

Hardware Availability: Jun-2013

Software Availability: Jun-2013

Peak Optimization Flags (Continued)

471.omnetpp: `-xAVX`(pass 2) `-prof-gen`(pass 1) `-ipo`(pass 2) `-O3`(pass 2)
`-no-prec-div`(pass 2) `-prof-use`(pass 2) `-ansi-alias`
`-opt-ra-region-strategy=block -Wl,-z,muldefs`
`-L/sh -lsmartheap`

473.astar: `basepeak = yes`

483.xalancbmk: `basepeak = yes`

Peak Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.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.

Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 20:36:58 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 12 March 2014.