SPEC® CINT2006 Result
Copyright 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation

SPECint®_rate2006 = 928

Express5800/R120f-2E (Intel Xeon E5-2660 v3)

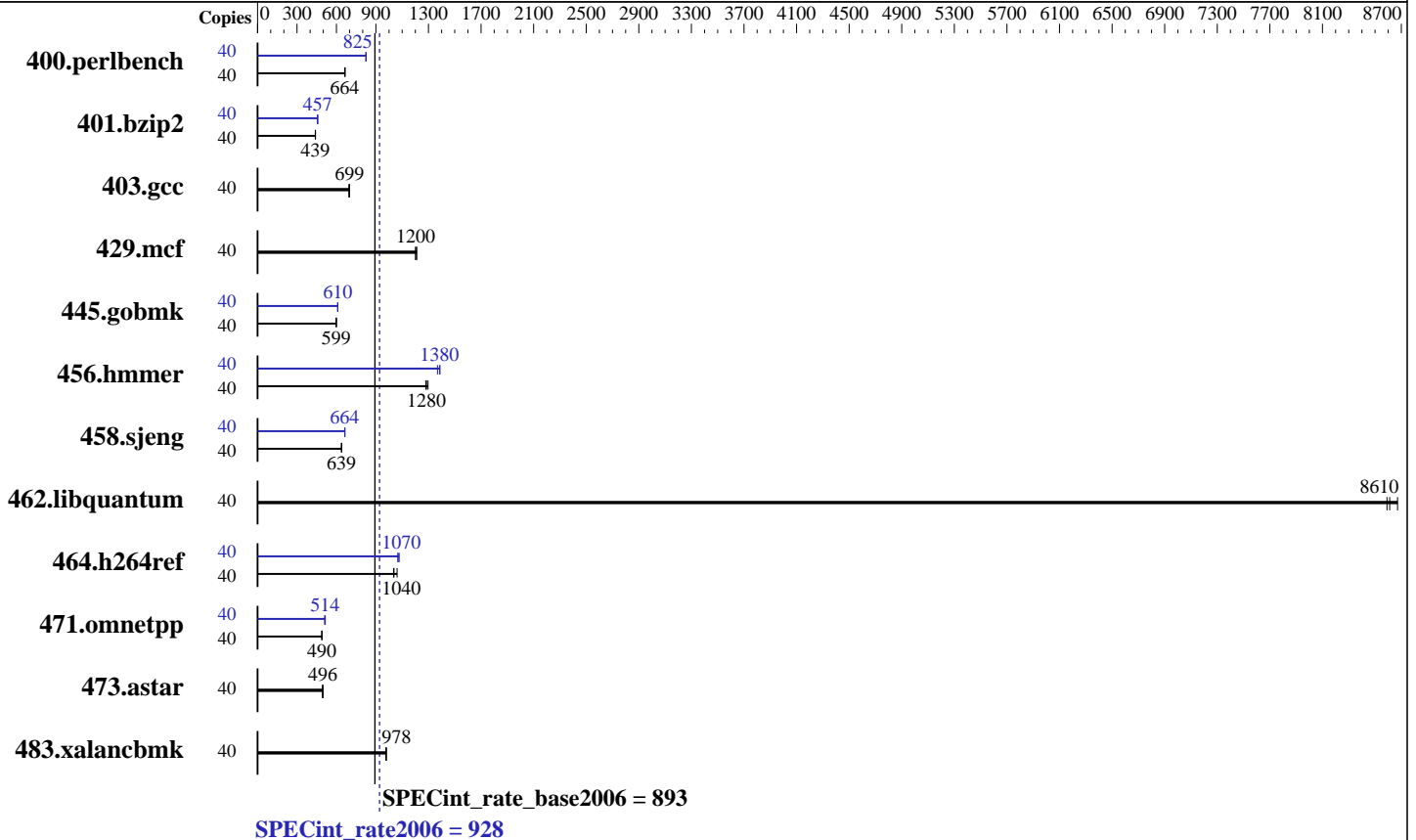SPECint_rate_base2006 = 893

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Dec-2014

Hardware Availability: Jan-2015

Software Availability: Jul-2014

Benchmark results bar chart. Copies = 40 for all benchmarks. Horizontal axis scale: 0, 300, 600, 900, 1300, 1700, 2100, 2500, 2900, 3300, 3700, 4100, 4500, 4900, 5300, 5700, 6100, 6500, 6900, 7300, 7700, 8100, 8700

- 400.perlbench: 825 (peak), 664 (base)
- 401.bzip2: 457 (peak), 439 (base)
- 403.gcc: 699
- 429.mcf: 1200
- 445.gobmk: 610 (peak), 599 (base)
- 456.hmmer: 1380 (peak), 1280 (base)
- 458.sjeng: 664 (peak), 639 (base)
- 462.libquantum: 8610
- 464.h264ref: 1070 (peak), 1040 (base)
- 471.omnetpp: 514 (peak), 490 (base)
- 473.astar: 496
- 483.xalancbmk: 978

SPECint_rate_base2006 = 893

SPECint_rate2006 = 928

Hardware

CPU Name: Intel Xeon E5-2660 v3

CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz

CPU MHz: 2600

FPU: Integrated

CPU(s) enabled: 20 cores, 2 chips, 10 cores/chip, 2 threads/core

CPU(s) orderable: 1,2 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: 25 MB I+D on chip per chip

Other Cache: None

Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)

Disk Subsystem: 1 x 250 GB SATA, 7200 RPM

Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)
Kernel 2.6.32-431.20.3.el6.x86_64

Compiler: C/C++: Version 15.0.0.090 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 V8.1

SPEC CINT2006 Result
Copyright 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/R120f-2E (Intel Xeon E5-2660 v3)

SPECint_rate2006 =   928

SPECint_rate_base2006 = 893

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Dec-2014
Hardware Availability: Jan-2015
Software Availability: Jul-2014

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	40	587	666	**589**	**664**	589	663	40	**474**	**825**	473	826	474	824
401.bzip2	40	**878**	**439**	875	441	878	439	40	846	456	844	458	**845**	**457**
403.gcc	40	**461**	**699**	460	700	464	694	40	**461**	**699**	460	700	464	694
429.mcf	40	**303**	**1200**	301	1210	303	1200	40	**303**	**1200**	301	1210	303	1200
445.gobmk	40	701	598	700	599	**701**	**599**	40	688	610	688	610	**688**	**610**
456.hmmer	40	**290**	**1280**	288	1300	292	1280	40	269	1390	273	1370	**270**	**1380**
458.sjeng	40	**758**	**639**	757	639	758	639	40	**729**	**664**	730	663	729	664
462.libquantum	40	95.6	8670	96.5	8590	**96.2**	**8610**	40	95.6	8670	96.5	8590	**96.2**	**8610**
464.h264ref	40	**853**	**1040**	856	1030	834	1060	40	822	1080	**827**	**1070**	830	1070
471.omnetpp	40	**510**	**490**	512	488	509	491	40	490	510	485	515	**487**	**514**
473.astar	40	**566**	**496**	565	497	568	494	40	**566**	**496**	565	497	568	494
483.xalancbmk	40	282	979	**282**	**978**	282	977	40	282	979	**282**	**978**	282	977

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 Settings:
    Power Management Policy: Custom
    Energy Performance: Performance
    Patrol Scrub: Disabled
    Cluster on Die: Enabled

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"

    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 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/R120f-2E (Intel Xeon E5-2660 v3)

SPECint_rate2006 =   928

SPECint_rate_base2006 = 893

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Dec-2014
Hardware Availability: Jan-2015
Software Availability: Jul-2014

General Notes (Continued)

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

Base Compiler Invocation

C benchmarks:
```
icc  -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

C++ benchmarks:
```
icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

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
```

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc  -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

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

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

Continued on next page

SPEC CINT2006 Result
Copyright 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/R120f-2E (Intel Xeon E5-2660 v3)

SPECint_rate2006 =   928

SPECint_rate_base2006 = 893

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Dec-2014
Hardware Availability: Jan-2015
Software Availability: Jul-2014

Peak Compiler Invocation (Continued)

456.hmmer: `icc -m64`

458.sjeng: `icc -m64`

C++ benchmarks:
`icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32`

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: `-xCORE-AVX2(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: `-xCORE-AVX2(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: `basepeak = yes`

429.mcf: `basepeak = yes`

445.gobmk: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)`
`-ansi-alias -opt-mem-layout-trans=3`

456.hmmer: `-xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32`

458.sjeng: `-xCORE-AVX2(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: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)`
`-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)`
`-unroll2 -ansi-alias`

Continued on next page

NEC Corporation

Express5800/R120f-2E (Intel Xeon E5-2660 v3)

SPECint_rate2006 =   928

SPECint_rate_base2006 = 893

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Dec-2014
Hardware Availability: Jan-2015
Software Availability: Jul-2014

Peak Optimization Flags (Continued)

C++ benchmarks:

> 471.omnetpp: `-xCORE-AVX2(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 files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html
http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-120f-RevB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-120f-RevB.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 Wed Feb 25 11:30:25 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 24 February 2015.