SPEC® CINT2006 Result

NEC Corporation

SPECint®_rate2006 =   861

Express5800/R120f-1E (Intel Xeon E5-2650 v3)

SPECint_rate_base2006 = 827

CPU2006 license: 9006

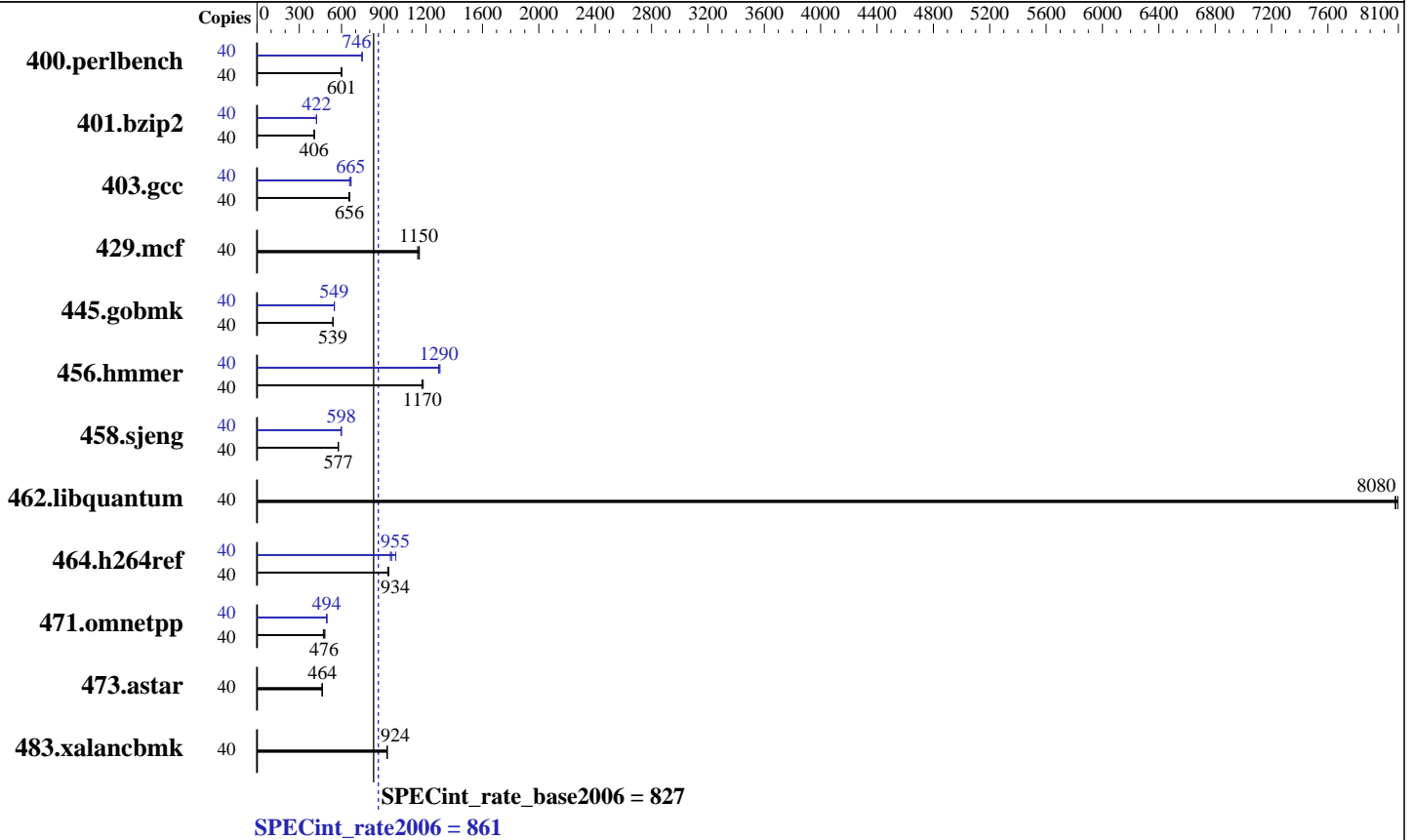**Test sponsor:** NEC Corporation

Tested by: NEC Corporation

Test date: Apr-2015

Hardware Availability: Jan-2015

Software Availability: Jul-2014

Copies																										
0	300	600	900	1200	1600	2000	2400	2800	3200	3600	4000	4400	4800	5200	5600	6000	6400	6800	7200	7600	8100

400.perlbench: 40 / 746, 40 / 601
401.bzip2: 40 / 422, 40 / 406
403.gcc: 40 / 665, 40 / 656
429.mcf: 40 / 1150
445.gobmk: 40 / 549, 40 / 539
456.hmmer: 40 / 1290, 40 / 1170
458.sjeng: 40 / 598, 40 / 577
462.libquantum: 40 / 8080
464.h264ref: 40 / 955, 40 / 934
471.omnetpp: 40 / 494, 40 / 476
473.astar: 40 / 464
483.xalancbmk: 40 / 924

SPECint_rate_base2006 = 827

SPECint_rate2006 = 861

Hardware

CPU Name:	Intel Xeon E5-2650 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 3.00 GHz
CPU MHz:	2300
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-1E (Intel Xeon E5-2650 v3)

SPECint_rate2006 =   861

SPECint_rate_base2006 =   827

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

Test date: Apr-2015
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	653	598	651	601	**651**	**601**	40	523	747	**524**	**746**	525	745
401.bzip2	40	948	407	**951**	**406**	952	406	40	**914**	**422**	914	422	914	422
403.gcc	40	494	652	**491**	**656**	489	659	40	490	657	482	668	**484**	**665**
429.mcf	40	**318**	**1150**	317	1150	320	1140	40	**318**	**1150**	317	1150	320	1140
445.gobmk	40	778	539	**778**	**539**	777	540	40	**765**	**549**	764	549	766	548
456.hmmer	40	316	1180	319	1170	**318**	**1170**	40	**289**	**1290**	287	1300	290	1290
458.sjeng	40	**839**	**577**	839	577	840	576	40	810	598	**809**	**598**	809	598
462.libquantum	40	**103**	**8080**	103	8080	102	8100	40	**103**	**8080**	103	8080	102	8100
464.h264ref	40	**948**	**934**	954	928	948	934	40	**927**	**955**	935	946	899	985
471.omnetpp	40	519	482	531	471	**525**	**476**	40	506	494	504	497	**506**	**494**
473.astar	40	605	464	**605**	**464**	609	461	40	605	464	**605**	**464**	609	461
483.xalancbmk	40	299	922	**299**	**924**	299	924	40	299	922	**299**	**924**	299	924

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-1E (Intel Xeon E5-2650 v3)

SPECint_rate2006 =   861

SPECint_rate_base2006 = 827

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

Test date: Apr-2015
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-1E (Intel Xeon E5-2650 v3)

SPECint_rate2006 = 861

SPECint_rate_base2006 = 827

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

Test date: Apr-2015
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: `-xCORE-AVX2 -ipo -O3 -no-prec-div`

    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`

NEC Corporation

Express5800/R120f-1E (Intel Xeon E5-2650 v3)

SPECint_rate2006 =   861

SPECint_rate_base2006 = 827

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

Test date: Apr-2015
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 file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic15.0-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 Tue May 19 18:12:36 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 19 May 2015.