NEC Corporation

Express5800/GT110g-S (Intel Core i3-4350)

SPECint\_rate2006 = 117
SPECint\_rate\_base2006 = 114

| Software | Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)  
| | Kernel 2.6.32-431.el6.x86_64 |
| | Compiler: C/C++: Version 14.0.2.144 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 |

| Hardware | CPU Name: Intel Core i3-4350 |
| | CPU Characteristics: |
| | CPU MHZ: 3600 |
| | FPU: Integrated |
| | CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip, 2 threads/core |
| | CPU(s) orderable: 1 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: 4 MB I+D on chip per chip |
| | Other Cache: None |
| | Memory: 16 GB (2 x 8 GB 2Rx8 PC3-12800E-11, ECC) |
| | Disk Subsystem: 1 x 250 GB SATA, 7200 RPM |
| | Other Hardware: None |

Test date: May-2014
Hardware Availability: Jul-2014
Software Availability: Jan-2014
Results Table

<table>
<thead>
<tr>
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<th>Seconds</th>
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<td>130</td>
</tr>
</tbody>
</table>

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:
Energy Performance: Performance

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.:
numactl --interleave=all runspec <etc>
SPEC CINT2006 Result

NEC Corporation

Express5800/GT110g-S (Intel Core i3-4350)

SPECint_rate2006 = 117
SPECint_rate_base2006 = 114

CPU2006 license: 9006
Test sponsor: NEC Corporation
Test by: NEC Corporation
Test date: May-2014
Hardware Availability: Jul-2014
Software Availability: Jan-2014

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

Peak Compiler Invocation

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

400.perlbench: icc -m64
401.bzip2: icc -m64
456.hmmer: icc -m64
458.sjeng: icc -m64

Continued on next page
Peak Compiler Invocation (Continued)

C++ benchmarks:
icpc -m32

Peak Portability Flags

```c
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:

```c
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
```

C++ benchmarks:
SPEC CINT2006 Result

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Test sponsor: NEC Corporation
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Peak Optimization Flags (Continued)

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(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-ic14.0-official-linux64.20140128.html
http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-R120-RevB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml
http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-R120-RevB.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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