NEC Corporation

Express5800/i120Rg-1
(Intel Xeon processor 5110)

SPECint®2006 = 12.5
SPECint_base2006 = 11.4

Hardware

CPU Name: Intel Xeon 5110
CPU Characteristics: 1.60 GHz, 4MB L2, 1066MHz bus
CPU MHz: 1600
FPU: Integrated
CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
CPU(s) orderable: 1.2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 4 MB I+D on chip per chip
L3 Cache: None
Other Cache: None
Memory: 8 GB (8x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1x80 GB SATAII, 7200RPM
Other Hardware: None

Software

Operating System: 64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp for x86_64
Compiler: Intel C++ Compiler for IA32/EM64T application, Version 10.0 - Build 20070426 Package ID: l_cc_p_10.0.023
Auto Parallel: No
File System: ext2
System State: Multiuser, Runlevel 3
Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: MicroQuill SmartHeap library 8.1
binutils-2.17.tar.gz, Version 2.17
SPEC CINT2006 Result

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CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation
Test date: Oct-2007
Hardware Availability: May-2007
Software Availability: Jun-2007

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Base Seconds</th>
<th>Ratio</th>
<th>Peak Seconds</th>
<th>Ratio</th>
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<td>8.14</td>
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<tr>
<td>483.xalancbmk</td>
<td>487</td>
<td>14.2</td>
<td>487</td>
<td>14.2</td>
<td>487</td>
<td>14.2</td>
</tr>
</tbody>
</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run.

General Notes

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer, for peak, are compiled in 64-bit mode.

Base Compiler Invocation

C benchmarks: icc

C++ benchmarks: icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Standard Performance Evaluation Corporation
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Base Optimization Flags

C benchmarks:
- -fast

C++ benchmarks:
- -xT -ipo -03 -no-prec-div -Wl,-z,muldefs
- -L/opt/SmartHeap_8.1/lib -lsmartheap

Base Other Flags

C benchmarks:
- 403 gcc -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc
- 401.bzip2: /opt/intel/cce/10.0.023/bin/icc
- 456.hmmer: /opt/intel/cce/10.0.023/bin/icc

C++ benchmarks:
icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:
- 400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias
- -prefetch
- 401.bzip2: -L/opt/intel/cce/10.0.023/lib -I/opt/intel/cce/10.0.023/include
- -prof-gen(pass 1) -prof-use(pass 2) -fast

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- Peak Optimization Flags (Continued)
  403gcc: basepeak = yes
  429mcf: -fast -prefetch
  445gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo
  -no-prec_div -ansi-alias
  456hmmer: -L/opt/intel/cce/10.0.023/lib -I/opt/intel/cce/10.0.023/include
  -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
  -ansi-alias
  458sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4
  462libquantum: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -Ob0
  -prefetch -opt-streaming-stores always
  464h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
  -ansi-alias
  C++ benchmarks:
  471omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
  -no-prec_div -ansi-alias -Wl,-z,muldefs
  -L/opt/SmartHeap_8.1/lib -lsmartheap
  473astar: Same as 471omnetpp
  483xalancbmk: basepeak = yes

- Peak Other Flags
  C benchmarks:
  403gcc: -Dalloca=_alloca

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/NEC-ic10-linux-flags.20090714.html
You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/NEC-ic10-linux-flags.20090714.xml
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Tested with SPEC CPU2006 v1.0.