SPEC® CINT2006 Result

Fujitsu Siemens Computers
PRIMERGY TX300 S3, Intel Xeon processor 5160, 3.0 GHz

SPECint®_rate2006 = 59.1
SPECint_rate_base2006 = 56.3

CPU2006 license: 22
Test sponsor: Fujitsu Siemens Computers
Tested by: Fujitsu Siemens Computers

Hardware
CPU Name: Intel Xeon 5160
CPU Characteristics: 1333 MHz system bus
CPU MHz: 3000
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 DDR2 PC2-5300F, 2 rank, CAS 5-5-5, with ECC)
Disk Subsystem: SAS (73GB 15400 rpm)
Other Hardware: None

Software
Operating System: 64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp on an x86_64
Auto Parallel: No
File System: ext2
System State: Multiuser, Runlevel 3
Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: Smart Heap Library, Version 8.1

Test date: May-2007
Hardware Availability: Jul-2006
Software Availability: Feb-2007
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### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>4</td>
<td>505</td>
<td>77.4</td>
<td>506</td>
<td>77.3</td>
<td>503</td>
<td>77.7</td>
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<td>401.bzip2</td>
<td>4</td>
<td>854</td>
<td>45.2</td>
<td>860</td>
<td>44.9</td>
<td><strong>856</strong></td>
<td><strong>45.1</strong></td>
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<tr>
<td>403.gcc</td>
<td>4</td>
<td><strong>598</strong></td>
<td><strong>53.9</strong></td>
<td>592</td>
<td>54.4</td>
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<tr>
<td>429.mcf</td>
<td>4</td>
<td>760</td>
<td>48.0</td>
<td><strong>760</strong></td>
<td><strong>48.0</strong></td>
<td>759</td>
<td>48.1</td>
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<tr>
<td>445.gobmk</td>
<td>4</td>
<td>555</td>
<td>75.5</td>
<td>554</td>
<td>75.8</td>
<td><strong>555</strong></td>
<td><strong>75.6</strong></td>
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<tr>
<td>456.hmmer</td>
<td>4</td>
<td>743</td>
<td>50.2</td>
<td><strong>742</strong></td>
<td><strong>50.3</strong></td>
<td>742</td>
<td>50.3</td>
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<tr>
<td>458.sjeng</td>
<td>4</td>
<td>684</td>
<td>70.8</td>
<td>679</td>
<td>71.2</td>
<td><strong>682</strong></td>
<td><strong>70.9</strong></td>
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<tr>
<td>462.libquantum</td>
<td>4</td>
<td><strong>2748</strong></td>
<td><strong>30.2</strong></td>
<td>2751</td>
<td>30.1</td>
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<tr>
<td>464.h264ref</td>
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<td><strong>737</strong></td>
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<td>471.omnetpp</td>
<td>4</td>
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<td>473.astar</td>
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<td><strong>652</strong></td>
<td><strong>43.1</strong></td>
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<td>43.1</td>
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<td>42.9</td>
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<tr>
<td>483.xalancbmk</td>
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<td>73.0</td>
<td><strong>379</strong></td>
<td><strong>72.9</strong></td>
<td>379</td>
<td>72.7</td>
</tr>
</tbody>
</table>

### Base Compiler Invocation

- **icc**

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**Operating System Notes**

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run './usr/bin/taskset' used to bind processes to CPUs

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**General Notes**

The system bus runs at 1333 MHz

All binaries were built with 32-bit Intel compiler except:
- 401.bzip2, 456.hmmer and 462.libquantum in peak were built with 64-bit Intel compiler by changing the path for include and library files.

BIOS configuration:
- Adjacent Sector Prefetch = Disable

This result was measured on the PRIMERGY RX300 S3. The PRIMERGY RX300 S3 and the PRIMERGY TX300 S3 are electronically equivalent.

For information about Fujitsu Siemens Computers in your country please see: http://www.fujitsu-siemens.com/countries

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**Base Compiler Invocation**

- icc

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Base Compiler Invocation (Continued)

C++ benchmarks:
icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_X64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-fast

C++ benchmarks:
-xP -O3 -ipo -no-prec-div -L/opt/SmartHeap_8_1/lib -lsmartheap

Peak Compiler Invocation

C benchmarks (except as noted below):
icc

401.bzip2: /opt/intel/cce/9.1.047/bin/icc
-I/opt/intel/cce/9.1.047/include
-L/opt/intel/cce/9.1.047/lib

456.hmmer: /opt/intel/cce/9.1.047/bin/icc
-I/opt/intel/cce/9.1.047/include
-L/opt/intel/cce/9.1.047/lib

462.libquantum: /opt/intel/cce/9.1.047/bin/icc
-I/opt/intel/cce/9.1.047/include
-L/opt/intel/cce/9.1.047/lib

C++ benchmarks:
icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64

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## Peak Portability Flags (Continued)

- 456.hmmer: `-DSPEC_CPU_LP64`
- 462.libquantum: `-DSPEC_CPU_LP64` `-DSPEC_CPU_LINUX`
- 483.xalancbmk: `-DSPEC_CPU_LINUX`

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## Peak Optimization Flags

### C benchmarks:

- 400.perlbench: `--prof_gen(pass 1) --prof_use(pass 2) -fast`
- 401.bzip2: `--fast`
- 403.gcc: `basepeak = yes`
- 429.mcf: `--prof_gen(pass 1) --prof_use(pass 2) -fast`  
  `-L/opt/SmartHeap_8_1/lib -lsmartheap`
- 445.gobmk: `Same as 429.mcf`
- 456.hmmer: `Same as 400.perlbench`
- 458.sjeng: `Same as 429.mcf`
- 462.libquantum: `Same as 400.perlbench`
- 464.h264ref: `Same as 429.mcf`

### C++ benchmarks:

- 471.omnetpp: `--prof_gen(pass 1) --prof_use(pass 2) -XP -O3 -ipo`  
  `-no-prec-div -L/opt/SmartHeap_8_1/lib -lsmartheap`
- 473.astar: `--prof_gen(pass 1) --prof_use(pass 2) -fast`  
  `-L/opt/SmartHeap_8_1/lib -lsmartheap`
- 483.xalancbmk: `basepeak = yes`

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The flags file that was used to format this result can be browsed at [http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.html)

You can also download the XML flags source by saving the following link:

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.