Fujitsu Siemens Computers
PRIMERGY RX300 S3, Intel Xeon processor E5310, 1.60 GHz

SPECint®_rate2006 = 62.9
SPECint_rate_base2006 = 59.8

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

Test date: Apr-2007
Hardware Availability: Nov-2006
Software Availability: Feb-2007

400.perlbench
401.bzip2
403.gcc
429.mcf
445.gobmk
456.hmmer
458.sjeng
462.libquantum
464.h264ref
471.omnetpp
473.astar
483.xalancbmk

Hardware
CPU Name: Intel Xeon E5310
CPU Characteristics: 1067 MHz system bus
CPU MHZ: 1600
FPU: Integrated
CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
CPU(s) orderable: 1.2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 8 MB I+D on chip per core, 4 MB shared / 2 cores
L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 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
Spec CINT2006 Result

Fujitsu Siemens Computers
PRIMERGY RX300 S3, Intel Xeon processor E5310, 1.60 GHz

SPECint_rate2006 = 62.9
SPECint_rate_base2006 = 59.8

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

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>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>8</td>
<td>926</td>
<td>84.4</td>
<td>929</td>
<td>84.2</td>
<td>923</td>
<td>84.7</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>8</td>
<td>1513</td>
<td>51.0</td>
<td>1507</td>
<td>51.2</td>
<td>1517</td>
<td>50.9</td>
</tr>
<tr>
<td>403.mcf</td>
<td>8</td>
<td>1064</td>
<td>60.5</td>
<td>1059</td>
<td>60.8</td>
<td>1078</td>
<td>59.8</td>
</tr>
<tr>
<td>429.gobmk</td>
<td>8</td>
<td>1483</td>
<td>49.2</td>
<td>1486</td>
<td>49.1</td>
<td>1482</td>
<td>49.2</td>
</tr>
<tr>
<td>445.gcc</td>
<td>8</td>
<td>1016</td>
<td>82.6</td>
<td>1018</td>
<td>82.4</td>
<td>1016</td>
<td>82.6</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>8</td>
<td>1435</td>
<td>52.0</td>
<td>1433</td>
<td>52.1</td>
<td>1439</td>
<td>51.9</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>8</td>
<td>1226</td>
<td>78.9</td>
<td>1225</td>
<td>79.0</td>
<td>1229</td>
<td>78.8</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>8</td>
<td>7157</td>
<td>23.2</td>
<td>7154</td>
<td>23.2</td>
<td>7145</td>
<td>23.2</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>8</td>
<td>1368</td>
<td>129</td>
<td>1369</td>
<td>129</td>
<td>1371</td>
<td>129</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>8</td>
<td>1096</td>
<td>45.6</td>
<td>1097</td>
<td>45.6</td>
<td>1095</td>
<td>45.7</td>
</tr>
<tr>
<td>473.astar</td>
<td>8</td>
<td>1209</td>
<td>46.5</td>
<td>1215</td>
<td>46.2</td>
<td>1215</td>
<td>46.2</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>8</td>
<td>730</td>
<td>75.6</td>
<td>731</td>
<td>75.5</td>
<td>730</td>
<td>75.6</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
'/usr/bin/taskset' used to bind processes to CPUs

General Notes

The system bus runs at 1067 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:
Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable

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

Base Compiler Invocation

C benchmarks:
icc

Continued on next page
Fujitsu Siemens Computers
PRIMERGY RX300 S3, Intel Xeon processor E5310, 1.60 GHz

**SPECint_rate2006** = 62.9
**SPECint_rate_base2006** = 59.8

<table>
<thead>
<tr>
<th>CPU2006 license:</th>
<th>22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test date:</td>
<td>Apr-2007</td>
</tr>
<tr>
<td>Test sponsor:</td>
<td>Fujitsu Siemens Computers</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Fujitsu Siemens Computers</td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>Nov-2006</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Feb-2007</td>
</tr>
</tbody>
</table>

---

### Base Compiler Invocation (Continued)

C++ benchmarks:
- `icpc`

---

### Base Portability Flags

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td><code>-DSPEC_CPU_LINUX_X64</code></td>
</tr>
<tr>
<td>462.libquantum</td>
<td><code>-DSPEC_CPU_LINUX</code></td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td><code>-DSPEC_CPU_LINUX</code></td>
</tr>
</tbody>
</table>

---

### Base Optimization Flags

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>C benchmarks</td>
<td><code>-fast</code></td>
</tr>
<tr>
<td>C++ benchmarks</td>
<td><code>-xP</code> <code>-O3</code> <code>-ipo</code> <code>-no-prec-div</code> <code>-L/opt/SmartHeap_8_1/lib</code> <code>-lsmartheap</code></td>
</tr>
</tbody>
</table>

---

### 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

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td><code>-DSPEC_CPU_LINUX_X64</code></td>
</tr>
<tr>
<td>401.bzip2</td>
<td><code>-DSPEC_CPU_LP64</code></td>
</tr>
</tbody>
</table>

---

Continued on next page
Fujitsu Siemens Computers
PRIMERGY RX300 S3, Intel Xeon processor E5310, 1.60 GHz

SPECint_rate2006 = 62.9
SPECint_rate_base2006 = 59.8

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

Test date: Apr-2007
Hardware Availability: Nov-2006
Software Availability: Feb-2007

Peak Portability Flags (Continued)

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

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

The flags file that was used to format this result can be browsed at

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.xml
# SPEC CINT2006 Result

Fujitsu Siemens Computers

PRIMERGY RX300 S3, Intel Xeon processor E5310, 1.60 GHz

<table>
<thead>
<tr>
<th>SPECint_rate2006 = 62.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_rate_base2006 = 59.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CPU2006 license: 22</th>
<th>Test date: Apr-2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test sponsor: Fujitsu Siemens Computers</td>
<td>Hardware Availability: Nov-2006</td>
</tr>
<tr>
<td>Tested by: Fujitsu Siemens Computers</td>
<td>Software Availability: Feb-2007</td>
</tr>
</tbody>
</table>

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 v1.0.
Report generated on Tue Jul 22 12:09:06 2014 by SPEC CPU2006 PS/PDF formatter v6932.