Fujitsu

PRIMERGY BX620 S6, Intel Xeon E5645, 2.40 GHz

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Jan-2011
Hardware Availability: Feb-2011
Software Availability: Jan-2011

CPU Name: Intel Xeon E5645
CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
CPU MHz: 2400
FPU: Integrated
CPU(s) enabled: 6 cores, 1 chip, 6 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: 12 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (6 x 8 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 1 x SAS, 300 GB, 10000 RPM
Other Hardware: ---

Operating System: SUSE Linux Enterprise Server 11 (x86_64) with SP1, Kernel 2.6.32.12-0.7-default
Compiler: Intel C++ Compiler XE for applications running on IA-32 Version 12.0.1.116 Build 20101116
Auto Parallel: No
File System: ext3
System State: Run level 3 (multi-user)
Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V9.01

SPECint_rate2006 = 163
SPECint_rate_base2006 = 153

Software Availability: Jan-2011
Hardware Availability: Feb-2011
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401.bzip2
403.gcc
429.mcf
445.gobmk
456.hmmer
458.sjeng
462.libquantum
464.h264ref
471.omnetpp
473.astar
483.xalancbmk

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Hardware

Software
Fujitsu

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SPECint_rate2006 = 163
SPECint_rate_base2006 = 153

Results Table

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<td>542</td>
<td>153</td>
</tr>
</tbody>
</table>

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

Submit Notes

The config file option 'submit' was used.
numactl was used to bind copies to the cores

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
Hugepages were not configured on the system

Platform Notes

BIOS configuration:
Data Reuse Optimization = Disable
Performance/Power Setting = Traditional

General Notes

For information about Fujitsu please visit: http://www.fujitsu.com
Binaries were compiled on RHEL5.5 with binutils-2.17.50.0.6-14.el5

Base Compiler Invocation

C benchmarks:
icc -m32

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### SPEC CINT2006 Result

**Fujitsu**  
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<table>
<thead>
<tr>
<th>SPECint_rate2006</th>
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**CPU2006 license:** 19  
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#### Base Compiler Invocation (Continued)

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:  
- xsSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch  
- B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

C++ benchmarks:  
- xsSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
- L/smartheap -lsmartheap  
- B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

#### 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

C++ benchmarks:  
- icpc -m32
SPEC CINT2006 Result

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Peak Portatility 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: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 1) -ipo(pass 2)
           -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
           -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

401.bzip2: -xSSE4.2(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
           -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div
           -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

429.mcf: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
           -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
           -ansi-alias -auto-ilp32

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
           -ansi-alias -auto-ilp32

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
           -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
           -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
           -unroll4 -auto-ilp32
           -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -xSSE4.2(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/smartheap -lsmartheap

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Peak Optimization Flags (Continued)

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
You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.20110222.00.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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