IBM Corporation
IBM System x3100 M4
(Intel Core i3-3240, 3.40 GHz)

**SPECint®2006 = 45.6**

**SPECint_base2006 = 43.5**

**Hardware**

- **CPU Name:** Intel Core i3-3240
- **CPU Characteristics:**
  - CPU MHz: 3400
  - 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: 3 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

**Software**

- **Operating System:** Red Hat Enterprise Linux Server release 6.2 (Santiago)
  - 2.6.32-220.el6.x86_64
- **Compiler:** C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux
- **Auto Parallel:** Yes
- **File System:** ext4
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 32/64-bit
- **Peak Pointers:** 32/64-bit
- **Other Software:** Microquill SmartHeap V9.01
IBM Corporation

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CPU2006 license: 11
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Test date: Oct-2012
Hardware Availability: Sep-2012
Software Availability: Dec-2011

Results Table

<table>
<thead>
<tr>
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<td>50.6</td>
</tr>
</tbody>
</table>

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

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

BIOS Settings:
Turbo Mode enabled in BIOS
C-State enabled in BIOS
Sysinfo program /root/SPECcpu1.2/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdf5032aaa42e583f96b07f99d3
running on localhost.localdomain Sun Oct 21 04:57:29 2012

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:
http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo
model name : Intel(R) Core(TM) i3-3240 CPU @ 3.40GHz
  1 "physical id"s (chips)
  4 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
cpu cores : 2
siblings : 4
physical 0: cores 0 1
cache size : 3072 KB

Continued on next page
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Platform Notes (Continued)

From /proc/meminfo
  MemTotal: 16322724 kB
  HugePages_Total: 0
  Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
  Red Hat Enterprise Linux Server release 6.2 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)

uname -a:
  Linux localhost.localdomain 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13 EST 2011 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Oct 19 15:43

SPEC is set to: /root/SPECcpu1.2
  Filesystem Type Size Used Avail Use% Mounted on
  /dev/mapper/VolGroup-lv_root ext4 50G 38G 9.5G 80% /

Additional information from dmidecode:
  Memory:
    2x Micron 18JSF1G72AZ-1G6D1 8 GB 1600 MHz 2 rank

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/root/SPECcpu1.2/lib64:/root/SPECcpu1.2/lib64"
OMP_NUM_THREADS = "2"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5
  Transparent Huge Pages enabled with:
    echo always > /sys/kernel/mm/redhat_transparent_hugepage/enable

Base Compiler Invocation

C benchmarks:
  icc -m64

C++ benchmarks:
  icpc -m64
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**Base Portability Flags**

- 400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
- 401.bzip2: -DSPEC_CPU_LP64
- 403.gcc: -DSPEC_CPU_LP64
- 429.mcf: -DSPEC_CPU_LP64
- 445.gobmk: -DSPEC_CPU_LP64
- 456.hmmer: -DSPEC_CPU_LP64
- 458.sjeng: -DSPEC_CPU_LP64
- 462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
- 464.h264ref: -DSPEC_CPU_LP64
- 471.omnetpp: -DSPEC_CPU_LP64
- 473.astar: -DSPEC_CPU_LP64
- 483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

**Base Optimization Flags**

- C benchmarks:
  -xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32
- C++ benchmarks:
  -xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -Wl,-z,muldefs
  -L/smartheap -lsmartheap64

**Base Other Flags**

- C benchmarks:
  403.gcc: -Dalloca=_alloca

**Peak Compiler Invocation**

- C benchmarks (except as noted below):
  icc -m64
  400.perlbench: icc -m32
  445.gobmk: icc -m32
  464.h264ref: icc -m32
- C++ benchmarks (except as noted below):
  icpc -m32
  473.astar: icpc -m64
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Peak Portability Flags

-DSPEC_CPU_LINUX_IA32
-DSPEC_CPU_LP64

Peak Optimization Flags

C benchmarks:

- xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
  -no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch
  -ansi-alias

-C++ benchmarks:

- xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
  -opt-ra-region-strategy=block
  -ansi-alias

Continued on next page
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#### Peak Optimization Flags (Continued)

473.astar: basepeak = yes  
483.xalancbmk: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias  
-Wl,-z,muldefs -L/smartheap -lsmartheap

#### Peak Other Flags

**C benchmarks:**

403.gcc: -Dalloca=_alloca

The flags files that were used to format this result can be browsed at:


You can also download the XML flags sources by saving the following links:

- http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml

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For other inquiries, please contact webmaster@spec.org.

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