Bull SAS
NovaScale R440 F3 (Intel Xeon E5-2630L, 2.00 GHz)

| SPECint_rate2006 = | 389 |
| SPECint_rate_base2006 = | 372 |

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Dell Inc.

<table>
<thead>
<tr>
<th>Software</th>
<th>Hardware</th>
</tr>
</thead>
</table>
| Operating System: SUSE Linux Enterprise Server 11 SP2 (x86_64) 3.0.13-0.9-default | CPU Name: Intel Xeon E5-2630L
CPU Characteristics: Intel Turbo Boost Technology up to 2.50 GHz |
| Compiler: CIC++ Version 12.1.0.225 of Intel C++ Studio XE for Linux | CPU MHz: 2000 |
| Auto Parallel: No | FPU: Integrated |
| File System: ext3 | CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core |
| System State: Run level 3 (multi-user) | CPU(s) orderable: 1.2 chip |
| Base Pointers: 32-bit | Primary Cache: 32 KB I + 32 KB D on chip per core |
| Peak Pointers: 32/64-bit | Secondary Cache: 256 KB I+D on chip per core |
| Other Software: Microquill SmartHeap V9.01 | L3 Cache: 15 MB I+D on chip per chip |

SPECint_rate2006 = 389

| SPECint_rate_base2006 = | 372 |

<table>
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<td>277</td>
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<td>535</td>
</tr>
</tbody>
</table>

Hardware

- CPU Name: Intel Xeon E5-2630L
- CPU Characteristics: Intel Turbo Boost Technology up to 2.50 GHz
- CPU MHz: 2000
- FPU: Integrated
- CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core
- Primary Cache: 32 KB I + 32 KB D on chip per core
- Secondary Cache: 256 KB I+D on chip per core
- L3 Cache: 15 MB I+D on chip per chip
- Other Cache: None
- Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC, running at 1333 MHz)
- Disk Subsystem: 2 x 146 GB 15000 RPM SAS, RAID 0
- Other Hardware: None

Software

- Operating System: SUSE Linux Enterprise Server 11 SP2 (x86_64) 3.0.13-0.9-default
- Compiler: CIC++ Version 12.1.0.225 of Intel C++ Studio XE for Linux
- 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
Bull SAS

NovaScale R440 F3 (Intel Xeon E5-2630L, 2.00 GHz)

SPECint_rate2006 = 389
SPECint_rate_base2006 = 372

CPU2006 license: 20
Test sponsor: Bull SAS
Test date: Mar-2012
Hardware Availability: Mar-2012
Tested by: Dell Inc.
Software Availability: Feb-2012

Results Table

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<th>Seconds Base</th>
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<td>411</td>
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</tbody>
</table>

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

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

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

Platform Notes

CPU Power Management set to Maximum Performance
Memory Frequency set to Maximum Performance
Turbo Boost set to Enabled
C States/C1E set to Enabled
Sysinfo program /root/CPU2006-1.2/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 $6f2ebdf5032aaa42e583f96b07f99d3
running on unsvr Wed Mar 7 15:09:59 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) Xeon(R) CPU E5-2630L 0 @ 2.00GHz
  2 "physical id"s (chips)
  24 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The Continued on next page
SPEC CINT2006 Result

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Platform Notes (Continued)

following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
  cpu cores : 6
  siblings : 12
  physical 0: cores 0 1 2 3 4 5
  physical 1: cores 0 1 2 3 4 5
  cache size : 15360 KB

From /proc/meminfo
  MemTotal: 132089856 kB
  HugePages_Total: 0
  Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
  SUSE Linux Enterprise Server 11 (x86_64)

From /etc/*release* /etc/*version*
  SuSE-release:
    SUSE Linux Enterprise Server 11 (x86_64)
    VERSION = 11
    PATCHLEVEL = 2

uname -a:
  Linux unsvr 3.0.13-0.9-default #1 SMP Mon Jan 16 17:33:03 UTC 2012 (54ddfaf)
    x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Mar 7 15:08 last=S

SPEC is set to: /root/CPU2006-1.2
  Filesystem     Type  Size  Used Avail Use% Mounted on
  /dev/sda1      ext3  265G   68G  183G  28% /

Additional information from dmidecode:

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = ""/root/CPU2006-1.2/libs/32:/root/CPU2006-1.2/libs/64"

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/transparent_hugepage/enabled
Filesystem page cache cleared with:
  echo 1>/proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
  numactl --interleave=all runspec <etc>
The Dell PowerEdge R620 and
the Bull NovaScale R440 F3 models are electronically equivalent.

Continued on next page
Bull SAS
NovaScale R440 F3 (Intel Xeon E5-2630L, 2.00 GHz)

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Tested by: Dell Inc.

Test date: Mar-2012
Hardware Availability: Mar-2012
Software Availability: Feb-2012

---

**General Notes (Continued)**

The results have been measured on a Dell PowerEdge R620 model.

---

**Base Compiler Invocation**

- C benchmarks:
  - icc -m32

- 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:
  - -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

- C++ benchmarks:
  - -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
  - -Wl,-z,muldefs -L/smartheap -lsmartheap

---

**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

Continued on next page
Bull SAS
NovaScale R440 F3 (Intel Xeon E5-2630L, 2.00 GHz)

CPU2006 license: 20  Test date: Mar-2012
Test sponsor: Bull SAS  Hardware Availability: Mar-2012
Tested by: Dell Inc.  Software Availability: Feb-2012

Peak Compiler Invocation (Continued)

458.sjeng: icc -m64

C++ benchmarks:
icpc -m32

Peak Portability 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 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-auto-1lp32

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-1lp32 -ansi-alias

403.gcc: basepeak = yes
429.mcf: basepeak = yes
445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-1lp32

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-1lp32

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll2 -ansi-alias

Continued on next page
Bull SAS
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Software Availability: Feb-2012

### Peak Optimization Flags (Continued)

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

- 473.astar: basepeak = yes
- 483.xalancbmk: basepeak = yes

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

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