Dell Inc. PowerEdge R620 (Intel Xeon E5-2640, 2.50 GHz)

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Operating System: SUSE Linux Enterprise Server 11 SP2 (x86_64)
Compiler: C/C++: 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

SPECint®_rate2006 = 461
SPECint_rate_base2006 = 441

Test date: Mar-2012
Hardware Availability: Mar-2012
Software Availability: Feb-2012
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### Results Table

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</tr>
</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

System Profile set to Custom  
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 $ $Date:: 2011-10-11 #$ 6f2ebd5ff5032aaa42e583f96b07f99d3  
running on unsvr Sat Mar 3 10:36:41 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 E5-2640 0 @ 2.50GHz  
2 "physical id"s (chips)  
24 "processors"

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Platform Notes (Continued)

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 : 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: 132089860 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 3.0.13-0.19-default #1 SMP Fri Feb 3 15:38:23 UTC 2012 (7f256ae)
- x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Mar 3 10:34 last=S

SPEC is set to: /root/CPU2006-1.2

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

The Dell PowerEdge R620 and the Bull NovaScale R440 F3 models are electronically equivalent.

The results have been measured on a Dell PowerEdge R620 model

Filesystem page cache cleared with:

echo 1>/proc/sys/vm/drop_caches

runcspec command invoked through numactl i.e.:

numactl --interleave=all runspec <etc>
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## 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`
- `458.sjeng: icc -m64`

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

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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)
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-auto-ilp32

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-prefetch -auto-ilp32 -ansi-alias

403.gcc: -xSSE4.2 -ipo -03 -no-prec-div

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 -03 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll4 -auto-ilp32

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
-1/smartheap -1/smartheap

473.astar: basepeak = yes

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Peak Optimization Flags (Continued)

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

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
http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revA.20120328.xml

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

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