Dell Inc.  

PowerEdge T620 (Intel Xeon E5-2609, 2.40 GHz)  

**SPECint\_rate2006 = 224**  
**SPECint\_rate_base2006 = 215**

<table>
<thead>
<tr>
<th>Program</th>
<th>SPECint_rate2006</th>
<th>SPECint_rate_base2006</th>
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<tbody>
<tr>
<td>400. perlbench</td>
<td>192</td>
<td>158</td>
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<tr>
<td>401. bzip2</td>
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<td>110</td>
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<tr>
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<td>429. mcf</td>
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<td>445. gobmk</td>
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<td>462. libquantum</td>
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<td>471. omnetpp</td>
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<td>122</td>
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<td>473. astar</td>
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<tr>
<td>483. xalancbmk</td>
<td>255</td>
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</tr>
</tbody>
</table>

**Hardware**  

- **CPU Name:** Intel Xeon E5-2609  
- **CPU Characteristics:**  
  - **CPU MHz:** 2400  
  - **FPU:** Integrated  
  - **CPU(s) enabled:** 8 cores, 2 chips, 4 cores/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:** 10 MB I+D on chip per chip  
  - **Other Cache:** None  
- **Memory:** 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC, running at 1066 MHz)  
- **Disk Subsystem:** 1 x 250 GB 7200 RPM SATA  
- **Other Hardware:** None

**Software**  

- **Operating System:** SUSE Linux Enterprise Server 11 SP2 (x86_64) 3.0.13-0.9-default  
- **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

---

**Test Info**  

- **CPU2006 license:** 55  
- **Test sponsor:** Dell Inc.  
- **Tested by:** Dell Inc.  
- **Test date:** Feb-2012  
- **Hardware Availability:** Mar-2012  
- **Software Availability:** Feb-2012
Dell Inc.
PowerEdge T620 (Intel Xeon E5-2609, 2.40 GHz)

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Results Table

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<td>254</td>
</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
C States/C1E set to Enabled
Sysinfo program /root/CPU2006-1.2/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on SUT Wed Feb 15 00:07:03 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 E5-2609 0 @ 2.40GHz
  2 "physical id"s (chips)
  8 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The Continued on next page
SPEC CINT2006 Result

Dell Inc.
PowerEdge T620 (Intel Xeon E5-2609, 2.40 GHz)

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Platform Notes (Continued)

following excerpts from /proc/cpuinfo might not be reliable. Use with caution.

- cpu cores: 4
- siblings: 4
- physical 0: cores 0 1 2 3
- physical 1: cores 0 1 2 3
- cache size: 10240 KB

From /proc/meminfo

MemTotal: 132098956 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 SUT 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 Feb 14 00:57 last=S

SPEC is set to: /root/CPU2006-1.2

Filesystem Type Size Used Avail Use% Mounted on
/dev/sda1 ext3 226G 69G 146G 32% /

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 T620 and the Bull NovaScale T840 F3 models are electronically equivalent.
The results have been measured on a Dell PowerEdge T620 model
Filesystem page cache cleared with:

```
echo 1 > /proc/sys/vm/drop_caches
```
runspec command invoked through numactl i.e.:

```
umactl --interleave=all runspec <etc>
```

Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/
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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
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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) -prof-use(pass 2) -auto-ilp32

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
opt-prefetch -auto-ilp32 -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 -03 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-opt(pas 2) -no-prec-div(pass 2) -prof-use(pass 2)

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)

473.astar: basepeak = yes

Continued on next page
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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 questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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