**Dell Inc.**

PowerEdge R710
(Intel Xeon X5560, 2.80 GHz)

**CPU2006 license:** 55
**Test sponsor:** Dell Inc.
**Tested by:** Bull SAS

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### SPECint Rate

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>SPECint_rate2006</th>
<th>SPECint_rate_base2006</th>
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<tbody>
<tr>
<td>400.perlbench</td>
<td>258</td>
<td>243</td>
</tr>
<tr>
<td>401.bzip2</td>
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<td></td>
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<tr>
<td>403.gcc</td>
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<tr>
<td>429.mcf</td>
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<tr>
<td>445.gobmk</td>
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<tr>
<td>464.h264ref</td>
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<tr>
<td>471.omnetpp</td>
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<tr>
<td>473.astar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>483.xalancbmk</td>
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</tr>
</tbody>
</table>

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### Software

- **Operating System:** SUSE Linux Enterprise Server 10 (x86_64) SP2, SP2 with patch Linux kernel 2.6.16.60-0.34-smp
- **Compiler:** Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l_cproc_p_11.1.064
- **File System:** ReiserFS
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 32-bit
- **Peak Pointers:** 32/64-bit
- **Other Software:** Microquill SmartHeap V8.1, Binutils 2.18.50.0.7.20080502

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### Hardware

- **CPU Name:** Intel Xeon X5560
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.20 GHz
- **CPU MHz:** 2800
- **FPU:** Integrated
- **CPU(s) enabled:** 8 cores, 2 chips, 4 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:** 8 MB I+D on chip per chip
- **Other Cache:** None
- **Memory:** 24 GB (6 x 4 GB PC3-10600R, 2 Rank, CL9-9-9, ECC)
- **Disk Subsystem:** 1 x 73 GB SAS, 10000 RPM
- **Other Hardware:** None
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CPU2006 license: 55
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Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base</th>
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<th>Peak</th>
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<td>423</td>
<td>261</td>
<td>427</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

General Notes
The Dell PowerEdge R710 and the Bull NovaScale R460 F2 models are electronically equivalent.
The results have been measured on a Bull NovaScale R460 F2 model.

Base Compiler Invocation
C benchmarks:
  icc -m32

C++ benchmarks:
  icpc -m32
Dell Inc.
PowerEdge R710
(Intel Xeon X5560, 2.80 GHz)

SPECint_rate2006 = 258
SPECint_rate_base2006 = 243

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

Test date: Mar-2010
Hardware Availability: Mar-2009
Software Availability: Dec-2009

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 -static -opt-prefetch

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m32

401.bzip2: icc -m64
456.hmmer: icc -m64
458.sjeng: icc -m64
462.libquantum: icc -m64

C++ benchmarks (except as noted below):
icpc -m32

473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64

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**SPEC CINT2006 Result**

**Dell Inc.**

PowerEdge R710
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SPECint_rate2006 = 258
SPECint_rate_base2006 = 243

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### Peak Portability Flags (Continued)

- 456.hmmer: -DSPEC_CPU_LP64
- 458.sjeng: -DSPEC_CPU_LP64
- 462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
- 473.astar: -DSPEC_CPU_LP64
- 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) -static(pass 2)
  - -prof-use(pass 2) -ansi-alias
- 401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
  - -o3(pass 2) -no-prec-div(pass 2) -static(pass 2)
  - -prof-use(pass 2) -opt-prefetch -ansi-alias -auto-ilp32
- 403.gcc: -xSSE4.2 -ipo -o3 -no-prec-div -static
- 429.mcf: -xSSE4.2 -ipo -o3 -no-prec-div -static -opt-prefetch
- 445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2
  - -ipo -no-prec-div -ansi-alias
- 456.hmmer: -xSSE4.2 -ipo -o3 -no-prec-div -static -unroll2
  - -ansi-alias -auto-ilp32
- 458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
  - -o3(pass 2) -no-prec-div(pass 2) -static(pass 2)
  - -prof-use(pass 2) -unroll4 -auto-ilp32
- 462.libquantum: -xSSE4.2 -ipo -o3 -no-prec-div -static -auto-ilp32
  - -opt-prefetch
- 464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
  - -o3(pass 2) -no-prec-div(pass 2) -static(pass 2)
  - -prof-use(pass 2) -unroll2 -ansi-alias

**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
- 473.astar: -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=routine -Wl,-z,muldefs

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SPEC CINT2006 Result

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PowerEdge R710
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SPECint\_rate2006 = 258
SPECint\_rate\_base2006 = 243

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Peak Optimization Flags (Continued)

473.astar (continued):

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:

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