SPEC® CINT2006 Result
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Dell Inc.

PowerEdge 2950 (Intel Xeon E5345, 2.33 GHz)

$SPECint^®\_rate2006 =$ 98.0

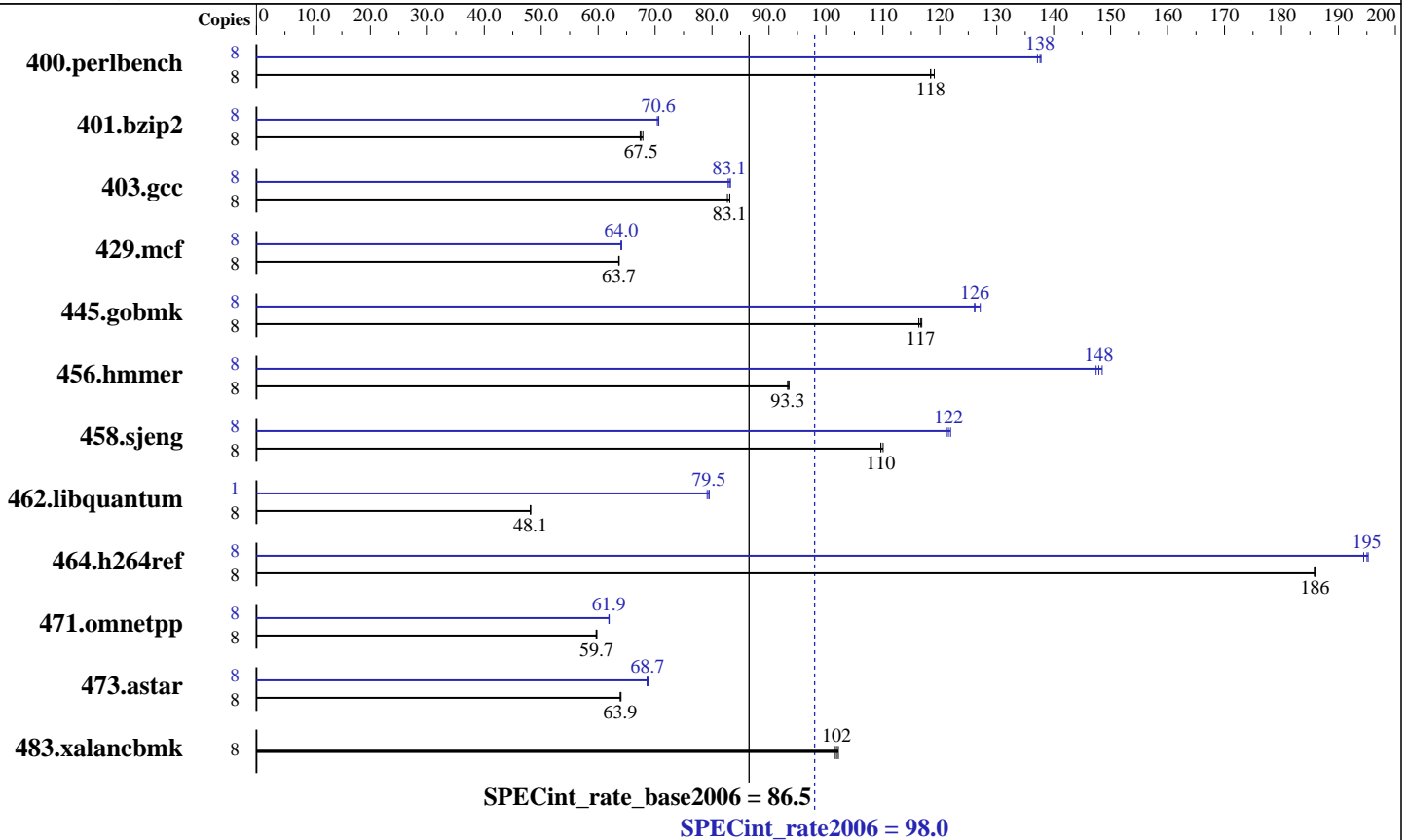$SPECint\_rate\_base2006 =$ 86.5

CPU2006 license: 55

Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Sep-2007

Hardware Availability: Dec-2006

Software Availability: Nov-2007

Benchmark results graph:

Benchmark	Copies	Peak	Base
400.perlbench	8 / 8	138	118
401.bzip2	8 / 8	70.6	67.5
403.gcc	8 / 8	83.1	83.1
429.mcf	8 / 8	64.0	63.7
445.gobmk	8 / 8	126	117
456.hmmer	8 / 8	148	93.3
458.sjeng	8 / 8	122	110
462.libquantum	1 / 8	79.5	48.1
464.h264ref	8 / 8	195	186
471.omnetpp	8 / 8	61.9	59.7
473.astar	8 / 8	68.7	63.9
483.xalancbmk	8		102

SPECint_rate_base2006 = 86.5

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Hardware

CPU Name: Intel Xeon E5345

CPU Characteristics: 1333MHz system bus

CPU MHz: 2333

FPU: Integrated

CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip

CPU(s) orderable: 1,2 chips

Primary Cache: 32 KB I + 32 KB D on chip per core

Secondary Cache: 8 MB I+D on chip per chip, 4 MB shared / 2 cores

L3 Cache: None

Other Cache: None

Memory: 16 GB (8x2 GB 667 MHz ECC CL5 FB-DIMM)

Disk Subsystem: 1 x 73 GB SAS 15k RPM

Other Hardware: None

Software

Operating System: 64-Bit SUSE LINUX Enterprise Server 10

Compiler: Intel C++ Compiler for Linux32 and Linux64 version 10.1 Build 20070725

Auto Parallel: Yes

File System: ReiserFS

System State: Multi-user, run level 3

Base Pointers: 32-bit

Peak Pointers: 32/64-bit

Other Software: SmartHeap library V8.1

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Results Table

| Benchmark | Base | | | | | | Peak | | | | | | |
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	660	118	**660**	**118**	657	119	8	570	137	567	138	**568**	**138**
401.bzip2	8	1146	67.4	1138	67.9	**1143**	**67.5**	8	1097	70.4	**1093**	**70.6**	1093	70.6
403.gcc	8	775	83.1	779	82.7	**775**	**83.1**	8	**775**	**83.1**	774	83.2	777	82.8
429.mcf	8	1146	63.7	1147	63.6	**1146**	**63.7**	8	1138	64.1	**1139**	**64.0**	1140	64.0
445.gobmk	8	722	116	**720**	**117**	718	117	8	**665**	**126**	666	126	660	127
456.hmmer	8	798	93.5	**800**	**93.3**	800	93.3	8	506	147	**505**	**148**	503	149
458.sjeng	8	880	110	**883**	**110**	883	110	8	**797**	**122**	794	122	799	121
462.libquantum	8	3444	48.1	**3445**	**48.1**	3445	48.1	1	261	79.5	262	79.1	**261**	**79.5**
464.h264ref	8	**952**	**186**	952	186	953	186	8	907	195	910	194	**908**	**195**
471.omnetpp	8	837	59.8	838	59.6	**837**	**59.7**	8	807	61.9	**808**	**61.9**	808	61.9
473.astar	8	877	64.0	**879**	**63.9**	879	63.9	8	**818**	**68.7**	819	68.6	817	68.8
483.xalancbmk	8	540	102	544	102	**542**	**102**	8	540	102	544	102	**542**	**102**

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

Compiler Invocation Notes

```
OMP_NUM_THREADS set to number of cores
KMP_STACK_SIZE set to 64M
KMP_AFFINITY set to physical,0
```

Operating System Notes

```
 'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
 '/usr/bin/taskset' used to bind processes to CPUs
```

Platform Notes

```
BIOS Settings:
 Adjacent Cache Line Prefetch = Disabled (default Enabled)
 Hardware Prefetcher = Disabled (default Enabled)
```

Base Compiler Invocation

C benchmarks:
```
icc
```

C++ benchmarks:
```
icpc
```

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Base Portability Flags

```
    400.perlbench: -DSPEC_CPU_LINUX_IA32
    462.libquantum: -DSPEC_CPU_LINUX
    483.xalancbmk: -DSPEC_CPU_LINUX
```

Base Optimization Flags

C benchmarks:
```
    -fast -inline-calloc -opt-malloc-options=3
```

C++ benchmarks:
```
    -xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
    -L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap
```

Base Other Flags

C benchmarks:

```
        403.gcc: -Dalloca=_alloca
```

Peak Compiler Invocation

C benchmarks (except as noted below):
```
    icc
```

```
    401.bzip2: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc
            -L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib
            -I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include

    456.hmmer: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc
            -L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib
            -I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include
```

C++ benchmarks:
```
    icpc
```

Peak Portability Flags

```
    400.perlbench: -DSPEC_CPU_LINUX_IA32
    401.bzip2: -DSPEC_CPU_LP64
    456.hmmer: -DSPEC_CPU_LP64
    462.libquantum: -DSPEC_CPU_LINUX
```

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Peak Portability Flags (Continued)

483.xalancbmk: `-DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

400.perlbench: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -ansi-alias -prefetch`

401.bzip2: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -prefetch`

403.gcc: `-fast -inline-calloc -opt-malloc-options=3`

429.mcf: `-fast -prefetch`

445.gobmk: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xT -O2 -ipo -no-prec-div -ansi-alias`

456.hmmer: `-fast -unroll2 -ansi-alias -opt-multi-version-aggressive`

458.sjeng: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll4`

462.libquantum: `-fast -unroll4 -Ob0 -prefetch -opt-streaming-stores always -vec-guard-write -opt-malloc-options=3 -parallel -par-runtime-control`

464.h264ref: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -ansi-alias`

C++ benchmarks:

471.omnetpp: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xT -O3 -ipo -no-prec-div -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs -L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap`

473.astar: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xT -O3 -ipo -no-prec-div -ansi-alias -opt-ra-region-strategy=routine -Wl,-z,muldefs -L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap`

483.xalancbmk: `basepeak = yes`

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Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.22.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.22.xml

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

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