SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Lenovo Group Limited

(Test Sponsor: Intel Corporation)

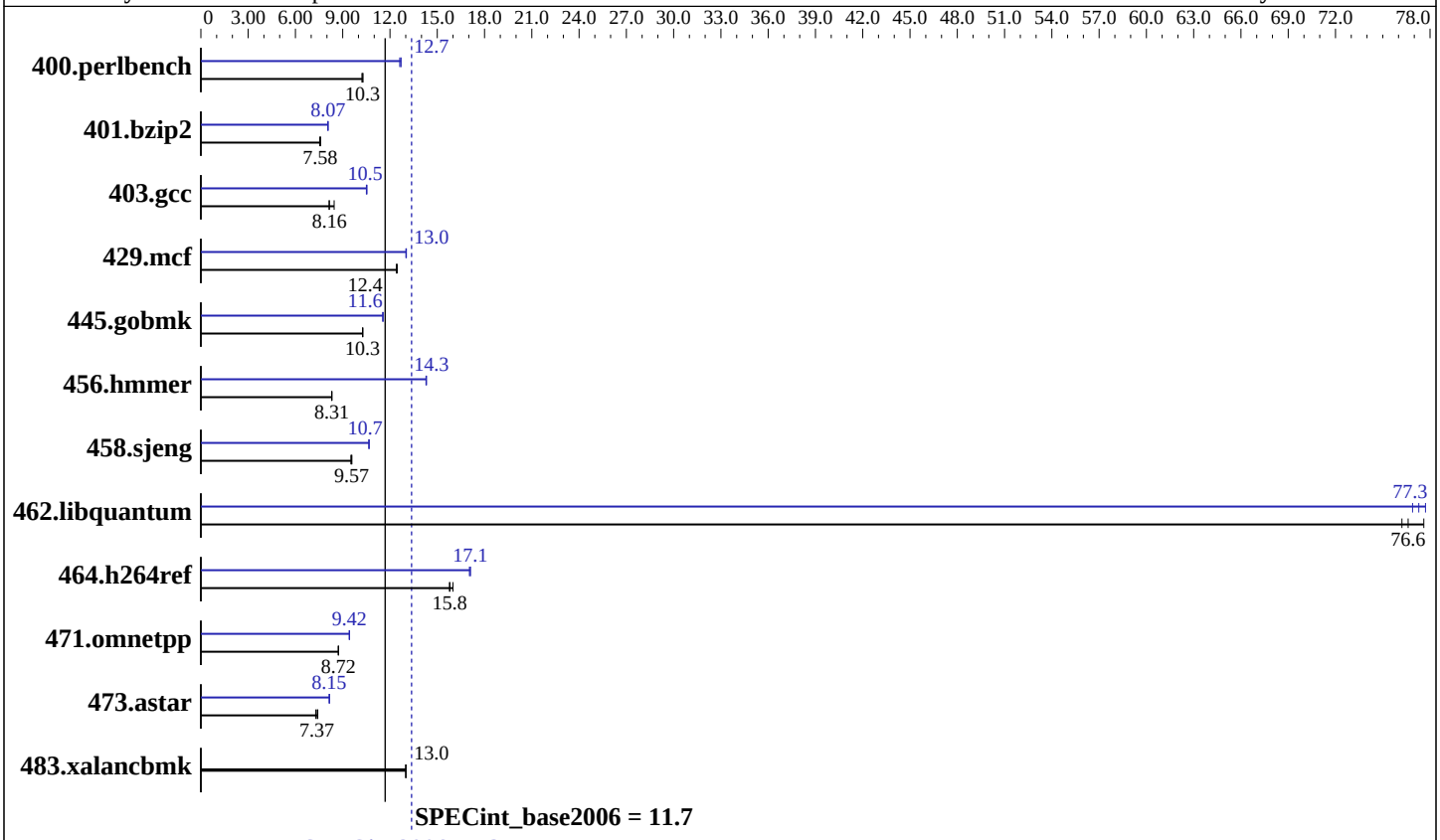
Lenovo R630 G7 (Intel Xeon processor E7310, 1.60 GHz)

SPECint®2006 = 13.4

SPECint_base2006 = 11.7

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Aug-2007
Hardware Availability: Oct-2007
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon E7310
CPU Characteristics:	Quad Core, 1.60 GHz
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	16 cores, 4 chips, 4 cores/chip
CPU(s) orderable:	1,2,4 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip, 2 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	16 GB (16 * 1GB Samsung DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	Seagate, SAS, 73GB, 10Krpm, 1 disk only
Other Hardware:	None

Software

Operating System:	64-Bit SUSE LINUX Enterprise Server 10 SP1 RC1, Kernel linux-cbgm 2.6.16.43-0.5-smp for x86_64
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 Binutils 2.17.50.0.15

SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Lenovo Group Limited

(Test Sponsor: Intel Corporation)

Lenovo R630 G7 (Intel Xeon processor E7310, 1.60 GHz)

SPECint2006 = 13.4

SPECint_base2006 = 11.7

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Aug-2007
Hardware Availability: Oct-2007
Software Availability: Nov-2007

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	**951**	**10.3**	956	10.2	950	10.3	**770**	**12.7**	769	12.7	774	12.6
401.bzip2	1280	7.54	**1273**	**7.58**	1271	7.59	**1196**	**8.07**	1199	8.05	1195	8.07
403.gcc	**987**	**8.16**	990	8.13	952	8.46	764	10.5	766	10.5	**765**	**10.5**
429.mcf	732	12.5	**733**	**12.4**	735	12.4	701	13.0	699	13.0	**700**	**13.0**
445.gobmk	1021	10.3	1022	10.3	**1021**	**10.3**	908	11.5	908	11.6	**908**	**11.6**
456.hmmer	1122	8.32	**1123**	**8.31**	1124	8.30	**652**	**14.3**	653	14.3	652	14.3
458.sjeng	**1264**	**9.57**	1271	9.52	1264	9.58	**1134**	**10.7**	1134	10.7	1134	10.7
462.libquantum	**270**	**76.6**	267	77.6	272	76.2	267	77.7	**268**	**77.3**	269	76.9
464.h264ref	1403	15.8	**1400**	**15.8**	1383	16.0	1299	17.0	**1295**	**17.1**	1294	17.1
471.omnetpp	716	8.72	**716**	**8.72**	716	8.73	**663**	**9.42**	662	9.44	664	9.41
473.astar	**952**	**7.37**	946	7.42	964	7.28	860	8.17	**862**	**8.15**	862	8.15
483.xalancbmk	530	13.0	**530**	**13.0**	531	13.0	530	13.0	**530**	**13.0**	531	13.0

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

General Notes

```
Bios settings:
Hardware Prefetcher:      Disabled
Adjacent Sector Prefetch: Disabled
High Bandwidth Option:    Disabled
All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer,
for peak, are compiled in 64-bit mode
```

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

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 -vec-guard-write -parallel -par-runtime-control
```

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/20070824/Linux64/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/include
```

456.hmmer:
```
/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/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`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

Continued on next page

Peak Optimization Flags (Continued)

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 -auto-ilp32`

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 -auto-ilp32`

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`

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.20090714.28.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.20090714.28.xml

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 14:57:01 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 16 October 2007.