



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/120Lj
(Intel Xeon E5405)

SPECint®2006 = 19.1

SPECint_base2006 = 16.6

CPU2006 license: 9006

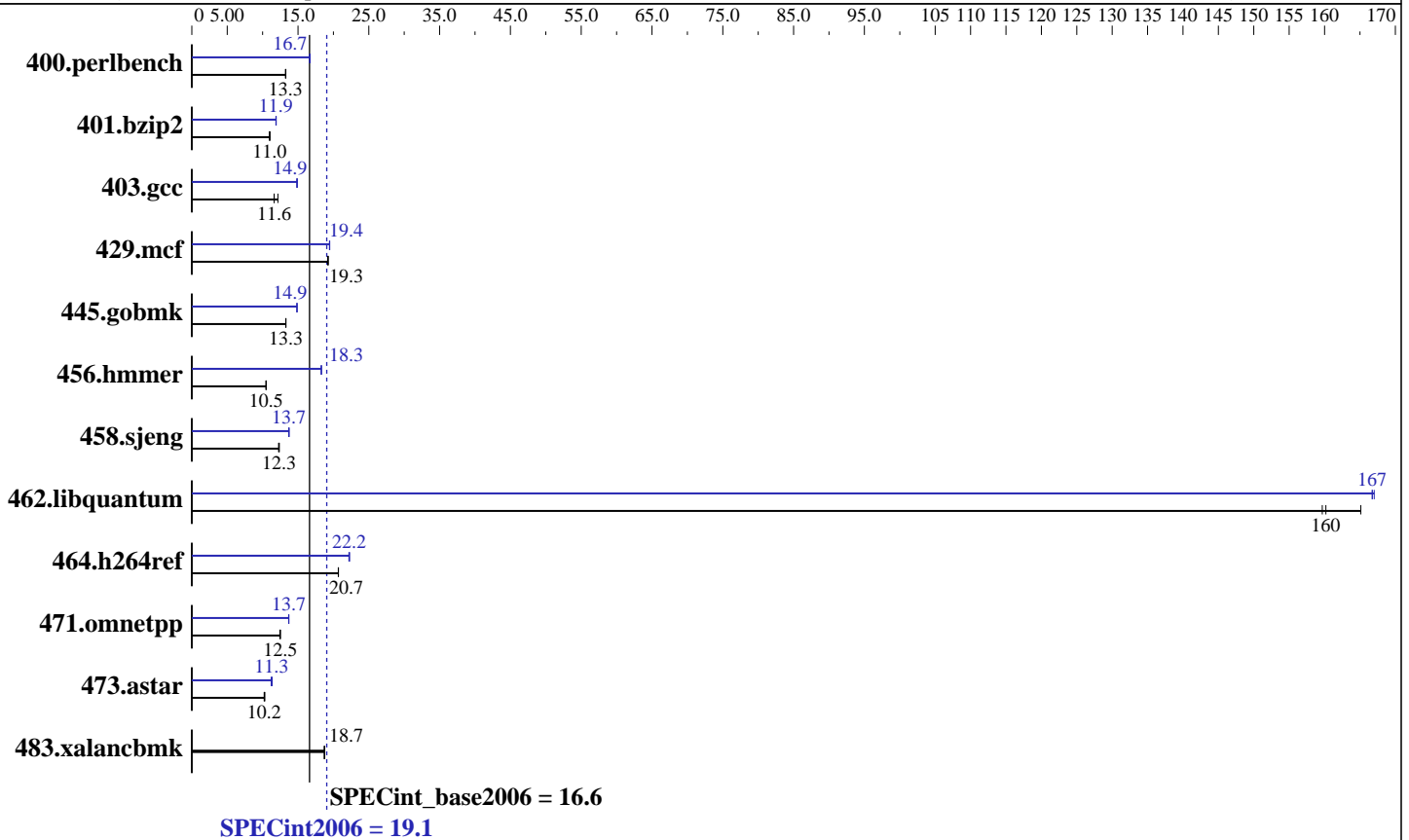
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Mar-2008

Hardware Availability: Feb-2008

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon E5405
 CPU Characteristics: 2.00 GHz, 2x6 MB L2 shared, 1333 MHz bus
 CPU MHz: 2000
 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: 12 MB I+D on chip per chip, 6 MB shared / 2 cores
 L3 Cache: None
 Other Cache: None
 Memory: 12 GB (12x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
 Disk Subsystem: 1x73.2 GB SAS, 15000RPM
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
 Compiler: Intel C++ Compiler for Linux32 and Linux64 version 10.1 Build 20070913 Package ID: L_cc_p_10.1.008
 Auto Parallel: Yes
 File System: ext2
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: MicroQuill SmartHeap library 8.1 binutils-2.17.tar.gz, Version 2.17



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	736	13.3	<u>737</u>	<u>13.3</u>	738	13.2	585	16.7	<u>585</u>	<u>16.7</u>	588	16.6
401.bzip2	875	11.0	<u>876</u>	<u>11.0</u>	882	10.9	<u>811</u>	<u>11.9</u>	812	11.9	809	11.9
403.gcc	693	11.6	662	12.2	<u>692</u>	<u>11.6</u>	<u>541</u>	<u>14.9</u>	540	14.9	543	14.8
429.mcf	473	19.3	<u>474</u>	<u>19.3</u>	475	19.2	469	19.4	<u>469</u>	<u>19.4</u>	468	19.5
445.gobmk	789	13.3	791	13.3	<u>790</u>	<u>13.3</u>	706	14.9	<u>706</u>	<u>14.9</u>	707	14.8
456.hmmmer	889	10.5	889	10.5	<u>889</u>	<u>10.5</u>	<u>510</u>	<u>18.3</u>	510	18.3	510	18.3
458.sjeng	<u>981</u>	<u>12.3</u>	980	12.3	987	12.3	885	13.7	879	13.8	<u>884</u>	<u>13.7</u>
462.libquantum	125	165	<u>129</u>	<u>160</u>	130	160	124	167	<u>124</u>	<u>167</u>	124	167
464.h264ref	1070	20.7	<u>1069</u>	<u>20.7</u>	1068	20.7	993	22.3	<u>995</u>	<u>22.2</u>	997	22.2
471.omnetpp	500	12.5	<u>500</u>	<u>12.5</u>	503	12.4	<u>456</u>	<u>13.7</u>	457	13.7	456	13.7
473.astar	680	10.3	687	10.2	<u>685</u>	<u>10.2</u>	626	11.2	618	11.4	<u>622</u>	<u>11.3</u>
483.xalancbmk	<u>368</u>	<u>18.7</u>	368	18.8	369	18.7	<u>368</u>	<u>18.7</u>	368	18.8	369	18.7

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

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
OMP_NUM_THREADS set to number of cores

Platform Notes

Bios settings:
Intel SpeedStep Technology: Disabled

General Notes

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmmer, for peak, are compiled in 64-bit mode

The NEC Express5800/120Lj(Intel Xeon E5405) and the Bull NovaScale T860 E1(Intel Xeon E5405,2.00GHz) models are electronically equivalent. The results have been measured on a NEC Express5800/120Lj(Intel Xeon E5405) model.

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

C++ benchmarks:

-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/opt/SmartHeap_8.1/lib -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc

401.bzip2: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include

456.hmmer: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/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
-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.hmmmer: -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/opt/SmartHeap_8.1/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/opt/SmartHeap_8.1/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/NEC-Intel-ic10.1-INT-ia32-linux-flags.20090713.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/NEC-Intel-ic10.1-INT-ia32-linux-flags.20090713.xml>

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

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 18:25:19 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 15 April 2008.