SPEC® CINT2006 Result

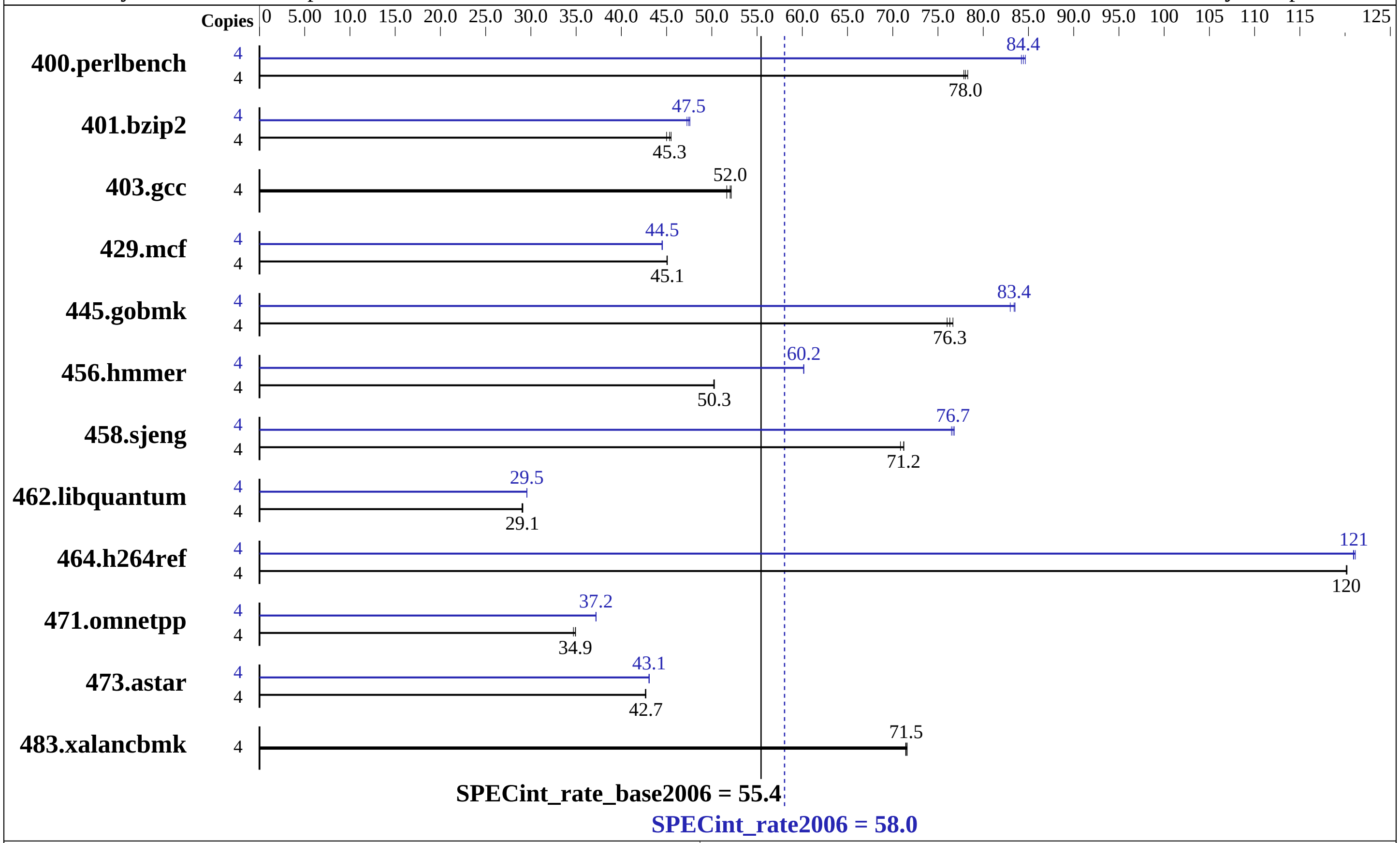
NEC Corporation

Express5800/120Rg-1
(Intel Xeon processor 5160)

SPECint®_rate2006 = 58.0

SPECint_rate_base2006 = 55.4

CPU2006 license:	9006	**Test date:**	May-2007
Test sponsor:	NEC Corporation	**Hardware Availability:**	May-2007
Tested by:	NEC Corporation	**Software Availability:**	Apr-2007



Hardware

CPU Name:	Intel Xeon 5160
CPU Characteristics:	3.00 GHz, 4MB L2, 1333MHz bus
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	8 GB (4x2 GB DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	1x146.5 GB SAS, 15000RPM
Other Hardware:	None

Software

Operating System:	64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp on an x86_64
Compiler:	Intel C++ Compiler for IA32/EM64T application, Version 9.1 - Build 20070320, Package-ID: l_cc_c_9.1.049
Auto Parallel:	No
File System:	ReiserFS
System State:	Multiuser, Runlevel 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	MicroQuill SmartHeap Library 8.1

Results Table

Benchmark	Base Copies	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Copies	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
400.perlbench	4	502	77.9	499	78.3	**501**	**78.0**	4	**463**	**84.4**	462	84.7	464	84.2
401.bzip2	4	858	45.0	848	45.5	**851**	**45.3**	4	811	47.6	817	47.3	**813**	**47.5**
403.gcc	4	623	51.7	**619**	**52.0**	617	52.1	4	623	51.7	**619**	**52.0**	617	52.1
429.mcf	4	810	45.0	809	45.1	**809**	**45.1**	4	819	44.5	820	44.5	**820**	**44.5**
445.gobmk	4	547	76.7	552	76.0	**550**	**76.3**	4	**503**	**83.4**	506	83.0	502	83.5
456.hmmer	4	743	50.2	**742**	**50.3**	742	50.3	4	620	60.2	621	60.1	**620**	**60.2**
458.sjeng	4	683	70.8	**680**	**71.2**	679	71.2	4	633	76.5	**631**	**76.7**	630	76.8
462.libquantum	4	2846	29.1	2857	29.0	**2853**	**29.1**	4	**2805**	**29.5**	2804	29.6	2805	29.5
464.h264ref	4	737	120	**737**	**120**	736	120	4	**732**	**121**	731	121	732	121
471.omnetpp	4	**716**	**34.9**	715	34.9	720	34.7	4	672	37.2	**672**	**37.2**	672	37.2
473.astar	4	659	42.6	**657**	**42.7**	657	42.7	4	652	43.1	652	43.0	**652**	**43.1**
483.xalancbmk	4	385	71.6	**386**	**71.5**	386	71.4	4	385	71.6	**386**	**71.5**	386	71.4

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

Operating System Notes

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

General Notes

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The system bus runs at 1333 MHz
All binaries were built with 32-bit Intel compiler except:
401.bzip2, 456.hmmer and 462.libquantum in peak were built with
64-bit Intel compiler by changing the path for include and library files.

The Express5800/120Rg-1 and the Express5800/120Ri-2 models are
electronically equivalent.
The results have been measured on a Express5800/120Ri-2 model.
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Base Compiler Invocation

C benchmarks:
    icc

C++ benchmarks:
    icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_X64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-fast

C++ benchmarks:
-xP -O3 -ipo -no-prec-div -L/opt/SmartHeap_8.1/lib -lsmartheap

Peak Compiler Invocation

C benchmarks (except as noted below):
icc

401.bzip2: /opt/intel/cce/9.1.049/bin/icc
-I/opt/intel/cce/9.1.049/include
-L/opt/intel/cce/9.1.049/lib

456.hmmer: /opt/intel/cce/9.1.049/bin/icc
-I/opt/intel/cce/9.1.049/include
-L/opt/intel/cce/9.1.049/lib

462.libquantum: /opt/intel/cce/9.1.049/bin/icc
-I/opt/intel/cce/9.1.049/include
-L/opt/intel/cce/9.1.049/lib

C++ benchmarks:
icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast`

401.bzip2: `-fast`

403.gcc: `basepeak = yes`

429.mcf: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast` `-L/opt/SmartHeap_8.1/lib -lsmartheap`

445.gobmk: `Same as 429.mcf`

456.hmmer: `Same as 400.perlbench`

458.sjeng: `Same as 429.mcf`

462.libquantum: `Same as 400.perlbench`

464.h264ref: `Same as 429.mcf`

C++ benchmarks:

471.omnetpp: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-xP -O3 -ipo` `-no-prec-div -L/opt/SmartHeap_8.1/lib -lsmartheap`

473.astar: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast` `-L/opt/SmartHeap_8.1/lib -lsmartheap`

483.xalancbmk: `basepeak = yes`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/NEC-ic91-linux-flags.20090714.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/NEC-ic91-linux-flags.20090714.xml

Tested with SPEC CPU2006 v1.0.
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