



# SPEC® CINT2006 Result

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## NEC Corporation

Express5800/120Li  
(Intel Xeon processor E5345)

**SPECint®2006 = 17.3**

**SPECint\_base2006 = 15.8**

CPU2006 license: 9006

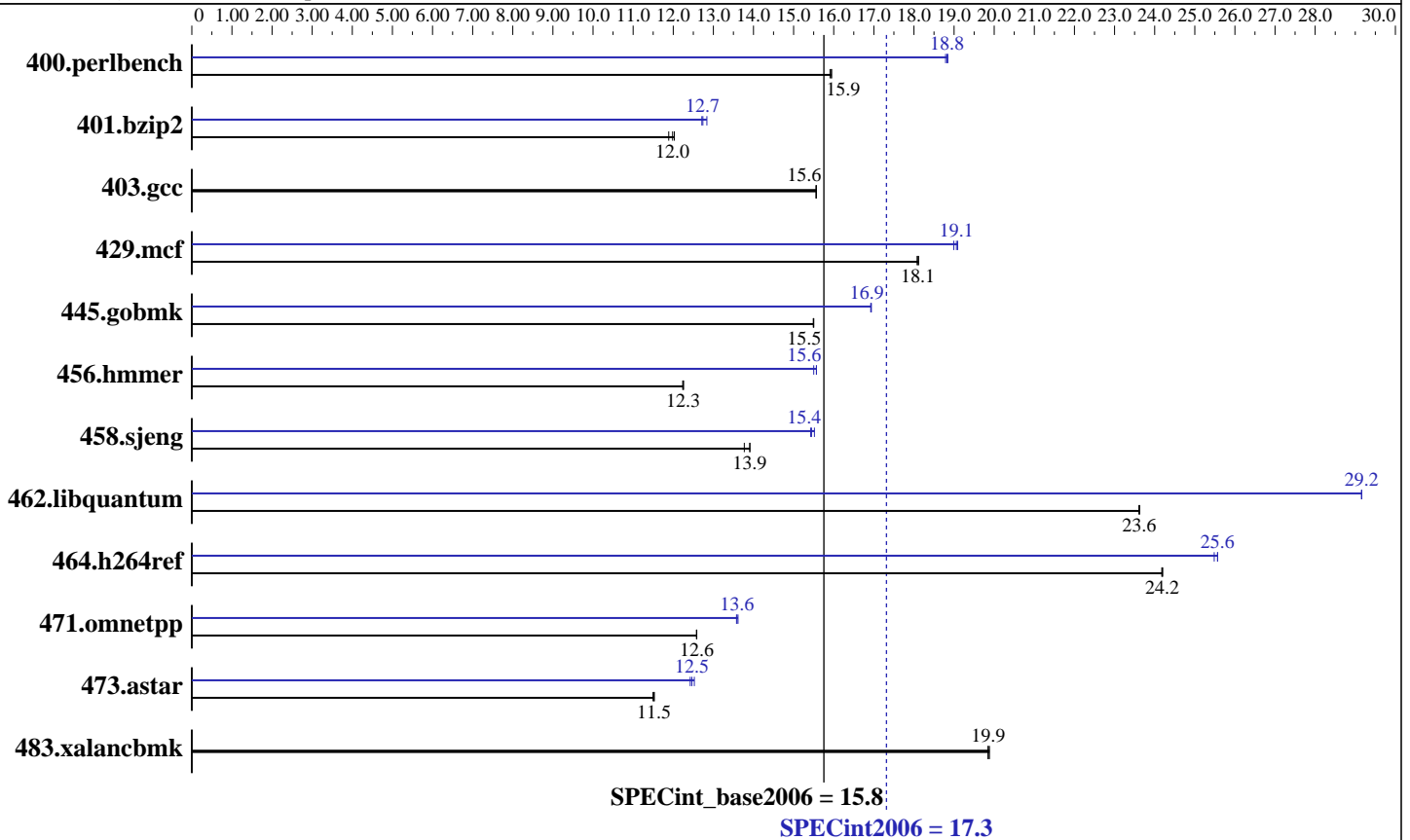
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Oct-2007

Hardware Availability: Jan-2007

Software Availability: Jun-2007



### Hardware

CPU Name: Intel Xeon E5345  
 CPU Characteristics: 2.33 GHz, 2x4 MB L2 shared, 1333 MHz 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: 8 GB (8x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)  
 Disk Subsystem: 1x73.2 GB SAS, 15000RPM  
 Other Hardware: None

### Software

Operating System: 64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp for x86\_64  
 Compiler: Intel C++ Compiler for IA32/EM64T application, Version 10.0 - Build 20070426 Package ID: l\_cc\_p\_10.0.023  
 Auto Parallel: No  
 File System: ext2  
 System State: Multiuser, Runlevel 3  
 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	614	15.9	<b>613</b>	<b>15.9</b>	613	15.9	520	18.8	518	18.8	<b>519</b>	<b>18.8</b>
401.bzip2	812	11.9	802	12.0	<b>805</b>	<b>12.0</b>	759	12.7	752	12.8	<b>758</b>	<b>12.7</b>
403.gcc	517	15.6	<b>517</b>	<b>15.6</b>	517	15.6	517	15.6	<b>517</b>	<b>15.6</b>	517	15.6
429.mcf	503	18.1	504	18.1	<b>504</b>	<b>18.1</b>	<b>479</b>	<b>19.1</b>	480	19.0	478	19.1
445.gobmk	<b>677</b>	<b>15.5</b>	677	15.5	677	15.5	620	16.9	<b>620</b>	<b>16.9</b>	619	16.9
456.hmmer	761	12.3	763	12.2	<b>762</b>	<b>12.3</b>	<b>599</b>	<b>15.6</b>	599	15.6	602	15.5
458.sjeng	870	13.9	879	13.8	<b>870</b>	<b>13.9</b>	784	15.4	780	15.5	<b>783</b>	<b>15.4</b>
462.libquantum	<b>877</b>	<b>23.6</b>	877	23.6	878	23.6	<b>711</b>	<b>29.2</b>	711	29.2	711	29.2
464.h264ref	<b>915</b>	<b>24.2</b>	915	24.2	914	24.2	866	25.6	868	25.5	<b>866</b>	<b>25.6</b>
471.omnetpp	497	12.6	497	12.6	<b>497</b>	<b>12.6</b>	460	13.6	459	13.6	<b>460</b>	<b>13.6</b>
473.astar	609	11.5	611	11.5	<b>609</b>	<b>11.5</b>	560	12.5	565	12.4	<b>563</b>	<b>12.5</b>
483.xalancbmk	347	19.9	<b>348</b>	<b>19.9</b>	348	19.8	347	19.9	<b>348</b>	<b>19.9</b>	348	19.8

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

## General Notes

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



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## Base Optimization Flags

C benchmarks:  
-fast

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/10.0.023/bin/icc  
456.hmmer: /opt/intel/cce/10.0.023/bin/icc

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:

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

401.bzip2: -L/opt/intel/cce/10.0.023/lib -I/opt/intel/cce/10.0.023/include  
-prof-gen(pass 1) -prof-use(pass 2) -fast

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## Peak Optimization Flags (Continued)

403.gcc: basepeak = yes

429.mcf: -fast -prefetch

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

456.hmmer: -L/opt/intel/cce/10.0.023/lib -I/opt/intel/cce/10.0.023/include  
-prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-ansi-alias

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

462.libquantum: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -Ob0  
-prefetch -opt-streaming-stores always

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 -Wl,-z,muldefs  
-L/opt/SmartHeap\_8.1/lib -lsmartheap

473.astar: Same as 471.omnetpp

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/NEC-ic10-linux-flags.20090714.html>

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

<http://www.spec.org/cpu2006/flags/NEC-ic10-linux-flags.20090714.xml>



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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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