



# SPEC® CINT2006 Result

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## Lenovo Group Limited

**SPECint®2006 = 23.1**

Lenovo ThinkServer TD100x(Intel Xeon E5430)

**SPECint\_base2006 = 22.3**

CPU2006 license: 9017

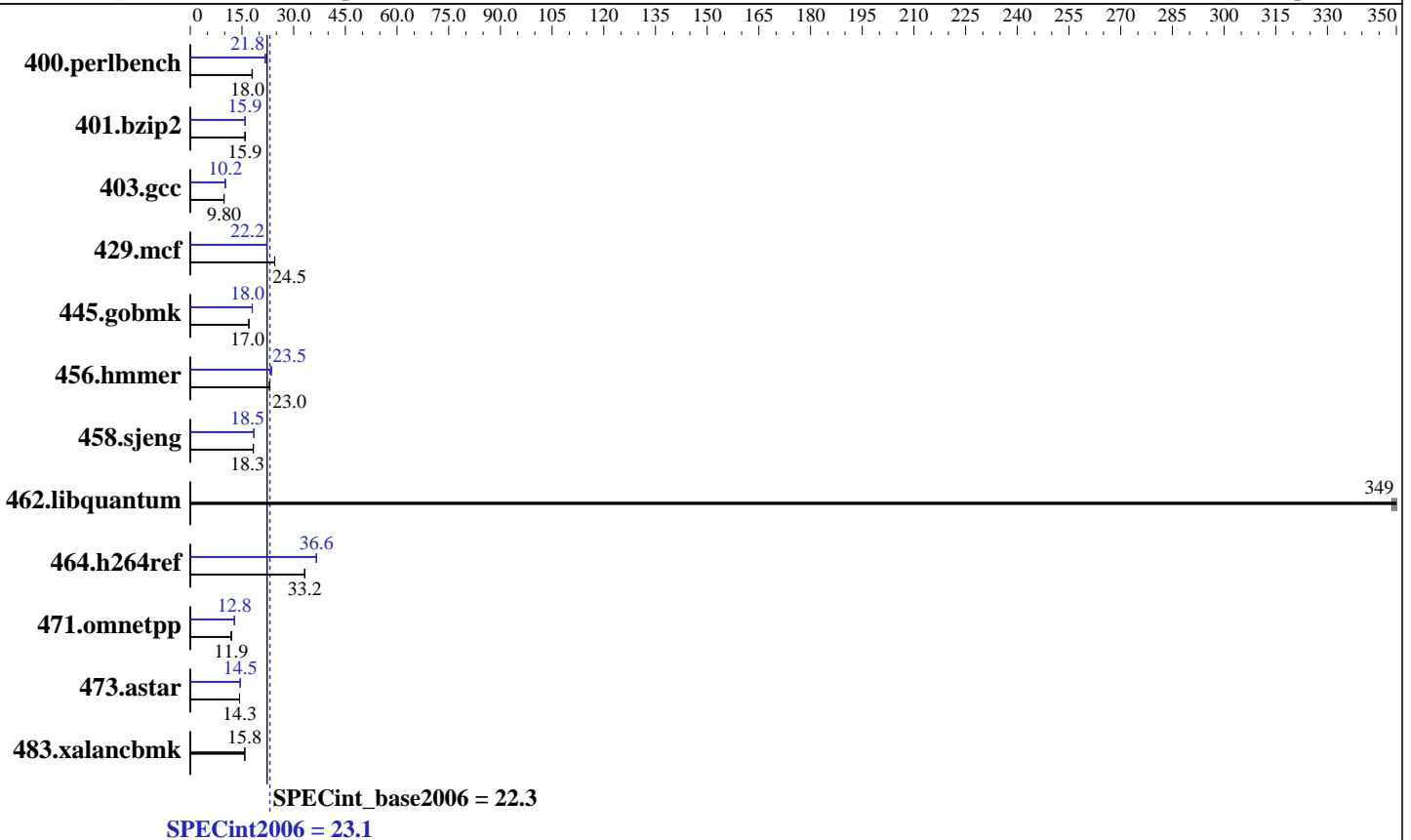
Test date: Apr-2009

Test sponsor: Lenovo Group Limited

Hardware Availability: Apr-2009

Tested by: Lenovo Group Limited

Software Availability: Apr-2009



### Hardware

CPU Name: Intel Xeon E5430  
 CPU Characteristics: 1333MHz system bus  
 CPU MHz: 2666  
 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: 16 GB (8 x 2GB Hynix 2Rx8 PC2 5300F)

Disk Subsystem: 1 x 160 GB, SATA 7200 RPM  
 Other Hardware: None

### Software

Operating System: Windows Server 2003 R2, Standard x64 Edition  
 Compiler: Intel C++ Compiler Professional 11.0 for Intel64  
 Build 20080930 Package ID: w\_cproc\_p\_11.0.072  
 Microsoft Visual Studio 2008 (for libraries)

Auto Parallel: Yes  
 File System: NTFS  
 System State: Default  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: SmartHeap Library Version 9.0 from  
<http://www.microquill.com/>



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<b>544</b>	<b>18.0</b>	544	18.0	544	17.9	449	21.8	<b>449</b>	<b>21.8</b>	449	21.8
401.bzip2	606	15.9	<b>606</b>	<b>15.9</b>	606	15.9	606	15.9	606	15.9	<b>606</b>	<b>15.9</b>
403.gcc	822	9.80	823	9.80	<b>822</b>	<b>9.80</b>	794	10.1	<b>790</b>	<b>10.2</b>	790	10.2
429.mcf	373	24.5	<b>373</b>	<b>24.5</b>	373	24.5	410	22.2	<b>410</b>	<b>22.2</b>	410	22.2
445.gobmk	615	17.0	616	17.0	<b>616</b>	<b>17.0</b>	584	18.0	<b>584</b>	<b>18.0</b>	584	18.0
456.hammer	405	23.0	405	23.0	<b>405</b>	<b>23.0</b>	397	23.5	<b>397</b>	<b>23.5</b>	397	23.5
458.sjeng	660	18.3	<b>660</b>	<b>18.3</b>	660	18.3	655	18.5	656	18.4	<b>655</b>	<b>18.5</b>
462.libquantum	59.2	350	59.4	349	<b>59.3</b>	<b>349</b>	59.2	350	59.4	349	<b>59.3</b>	<b>349</b>
464.h264ref	667	33.2	667	33.2	<b>667</b>	<b>33.2</b>	604	36.6	<b>604</b>	<b>36.6</b>	604	36.6
471.omnetpp	527	11.9	<b>527</b>	<b>11.9</b>	527	11.9	490	12.8	<b>490</b>	<b>12.8</b>	490	12.8
473.astar	491	14.3	<b>491</b>	<b>14.3</b>	491	14.3	483	14.5	<b>483</b>	<b>14.5</b>	483	14.5
483.xalancbmk	437	15.8	<b>437</b>	<b>15.8</b>	437	15.8	437	15.8	<b>437</b>	<b>15.8</b>	437	15.8

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

## Base Compiler Invocation

C benchmarks:

icl -Qvc9 -Qstd=c99

C++ benchmarks:

icl -Qvc9

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_WIN64\_X64  
 -DSPEC\_CPU\_NO\_NEED\_VA\_COPY  
 401.bzip2: -DSPEC\_CPU\_P64  
 403.gcc: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_WIN64  
 429.mcf: -DSPEC\_CPU\_P64  
 445.gobmk: -DSPEC\_CPU\_P64  
 456.hammer: -DSPEC\_CPU\_P64  
 458.sjeng: -DSPEC\_CPU\_P64  
 462.libquantum: -DSPEC\_CPU\_P64  
 464.h264ref: -DSPEC\_CPU\_P64 -DWIN32 -DSPEC\_CPU\_NO\_INTTYPES  
 471.omnetpp: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_WIN64  
 473.astar: -DSPEC\_CPU\_P64  
 483.xalancbmk: -DSPEC\_CPU\_P64 -Qoption,cpp,--no\_wchar\_t\_keyword



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## Base Optimization Flags

C benchmarks:

-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel  
-Qpar-runtime-control -Qvec-guard-write -Qauto-ilp32 /F512000000

C++ benchmarks:

-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features  
-Qauto-ilp32 /F512000000 shlW64Mt.lib -link /FORCE:MULTIPLE

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks:

icl -Qvc9 -Qstd=c99

C++ benchmarks:

icl -Qvc9

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

400.perlbench: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch  
/F512000000

401.bzip2: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias  
/F512000000

403.gcc: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- /F512000000

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## Peak Optimization Flags (Continued)

429.mcf: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000

445.gobmk: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O2 -Qprec-div- -Qansi-alias /F512000000

456.hmmr: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias /F512000000

458.sjeng: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4 /F512000000

462.libquantum: basepeak = yes

464.h264ref: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias /F512000000

C++ benchmarks:

471.omnetpp: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-ra-region-strategy=block /F512000000 shlW64Mt.lib -link /FORCE:MULTIPLE

473.astar: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-ra-region-strategy=routine /F512000000 shlW64Mt.lib -link /FORCE:MULTIPLE

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-ic11.0-winx64-revA.20090721.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-winx64-revA.20090721.xml>



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

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