



# SPEC<sup>®</sup> CINT2006 Result

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Itautec

SPECint<sup>®</sup>\_rate2006 = 343

Servidor Itautec MX223+ (Intel Xeon E5649)

SPECint\_rate\_base2006 = 328

CPU2006 license: 9001

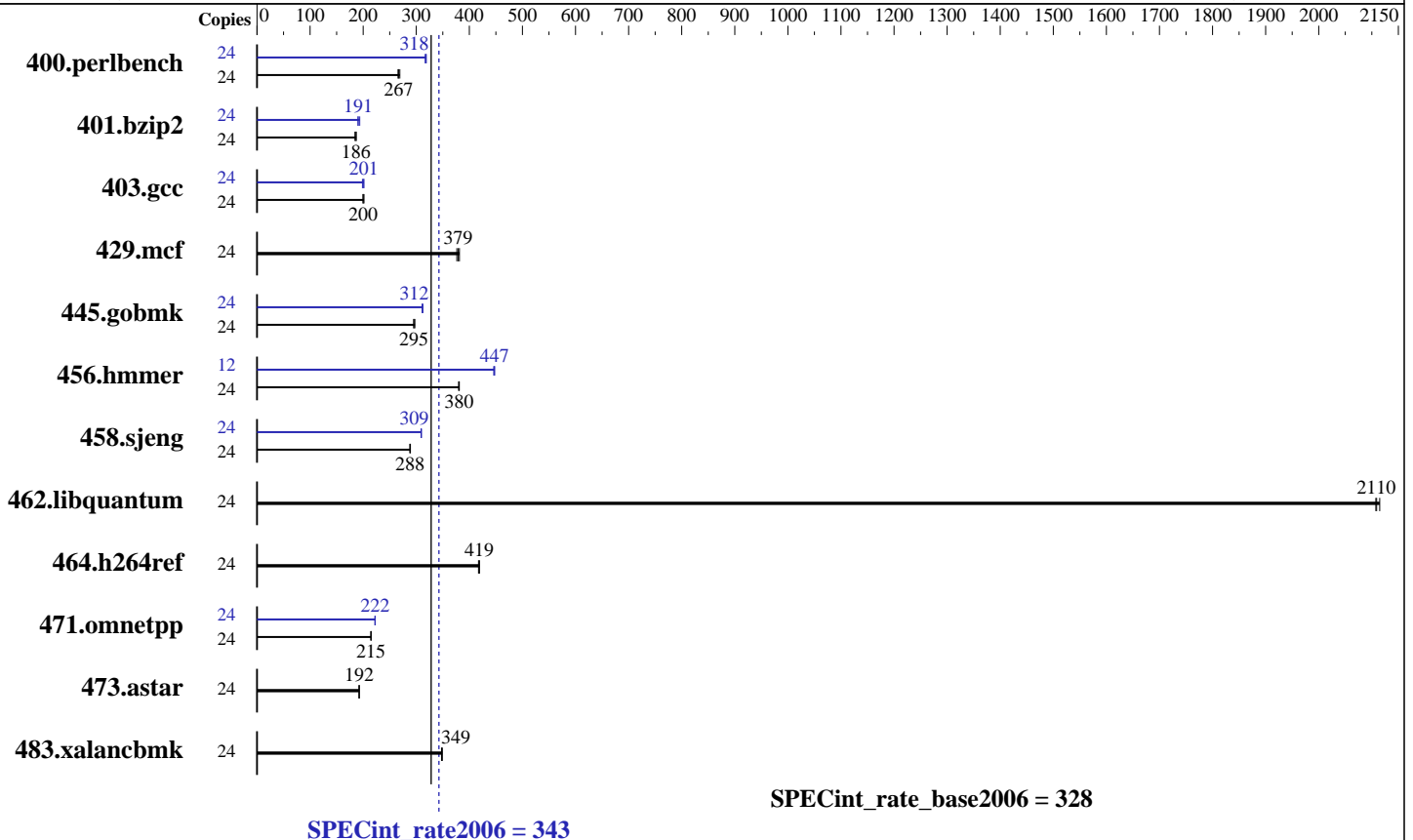
Test date: Apr-2012

Test sponsor: Itautec

Hardware Availability: Jul-2011

Tested by: Itautec

Software Availability: Dec-2011



## Hardware

CPU Name: Intel Xeon E5649  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.93 GHz  
 CPU MHz: 2533  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 256 KB I+D on chip per core  
 L3 Cache: 12 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)  
 Disk Subsystem: 2 x 146 GB, SAS, 15000 RPM, RAID 0  
 Other Hardware: None

## Software

Operating System: Red Hat Enterprise Linux Server Release 6.2, 2.6.32-220.el6.x86\_64  
 Compiler: C/C++: Version 12.1.0 of Intel Compiler XE Build 20111011  
 Auto Parallel: No  
 File System: ext4  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V8.1



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## Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
400.perlbench	24	871	269	883	266	<b>880</b>	<b>267</b>	24	740	317	735	319	<b>738</b>	<b>318</b>		
401.bzip2	24	1256	184	<b>1243</b>	<b>186</b>	1239	187	24	1197	194	1218	190	<b>1215</b>	<b>191</b>		
403.gcc	24	<b>966</b>	<b>200</b>	968	200	959	202	24	960	201	<b>961</b>	<b>201</b>	973	199		
429.mcf	24	582	376	574	381	<b>577</b>	<b>379</b>	24	582	376	574	381	<b>577</b>	<b>379</b>		
445.gobmk	24	<b>852</b>	<b>295</b>	853	295	847	297	24	<b>808</b>	<b>312</b>	809	311	806	312		
456.hammer	24	<b>589</b>	<b>380</b>	588	381	589	380	12	<b>250</b>	<b>447</b>	251	446	250	448		
458.sjeng	24	1005	289	<b>1007</b>	<b>288</b>	1009	288	24	938	310	940	309	<b>939</b>	<b>309</b>		
462.libquantum	24	<b>236</b>	<b>2110</b>	236	2110	235	2110	24	<b>236</b>	<b>2110</b>	236	2110	235	2110		
464.h264ref	24	<b>1269</b>	<b>419</b>	1273	417	1268	419	24	<b>1269</b>	<b>419</b>	1273	417	1268	419		
471.omnetpp	24	<b>698</b>	<b>215</b>	699	215	698	215	24	<b>675</b>	<b>222</b>	675	222	674	223		
473.astar	24	<b>876</b>	<b>192</b>	876	192	876	192	24	<b>876</b>	<b>192</b>	876	192	876	192		
483.xalancbmk	24	476	348	<b>475</b>	<b>349</b>	475	349	24	476	348	<b>475</b>	<b>349</b>	475	349		

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

## Submit Notes

The config file option 'submit' was used.  
numactl was used to bind copies to the cores

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run.  
Large pages were not enabled for this run

## Platform Notes

Data Reuse disabled in BIOS.  
DCU Prefetcher disabled in BIOS.

## General Notes

This result was measured on the Servidor Itautec MX224.  
The Servidor Itautec MX203+, Servidor Itautec MX223+ and the Servidor Itautec MX224 are electronically equivalent.

## Base Compiler Invocation

C benchmarks:  
icc -m32

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## Base Compiler Invocation (Continued)

C++ benchmarks:  
icpc -m32

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3  
C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3  
-Wl,-z,muldefs -L/home/rcaneca/sh/SmartHeap\_8.1/lib -lsmartheap

## Base Other Flags

C benchmarks:  
403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc -m32  
400.perlbench: icc -m64  
401.bzip2: icc -m64  
456.hmmer: icc -m64  
458.sjeng: icc -m64  
C++ benchmarks:  
icpc -m32



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## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-opt-prefetch -auto-ilp32 -ansi-alias  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -auto-ilp32

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll4 -auto-ilp32  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs  
-L/home/rcaneca/sh/SmartHeap\_8.1/lib -lsmartheap

473.astar: basepeak = yes

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## Peak Optimization Flags (Continued)

483.xalanbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

The flags files that were used to format this result can be browsed at

[http://www.spec.org/cpu2006/flags/Itaotec-Servidor\\_Itaotec-Intel-Linux-Platform.html](http://www.spec.org/cpu2006/flags/Itaotec-Servidor_Itaotec-Intel-Linux-Platform.html)  
<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html>

You can also download the XML flags sources by saving the following links:

[http://www.spec.org/cpu2006/flags/Itaotec-Servidor\\_Itaotec-Intel-Linux-Platform.xml](http://www.spec.org/cpu2006/flags/Itaotec-Servidor_Itaotec-Intel-Linux-Platform.xml)  
<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml>

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

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