SPEC® CINT2006 Result

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Cisco Systems

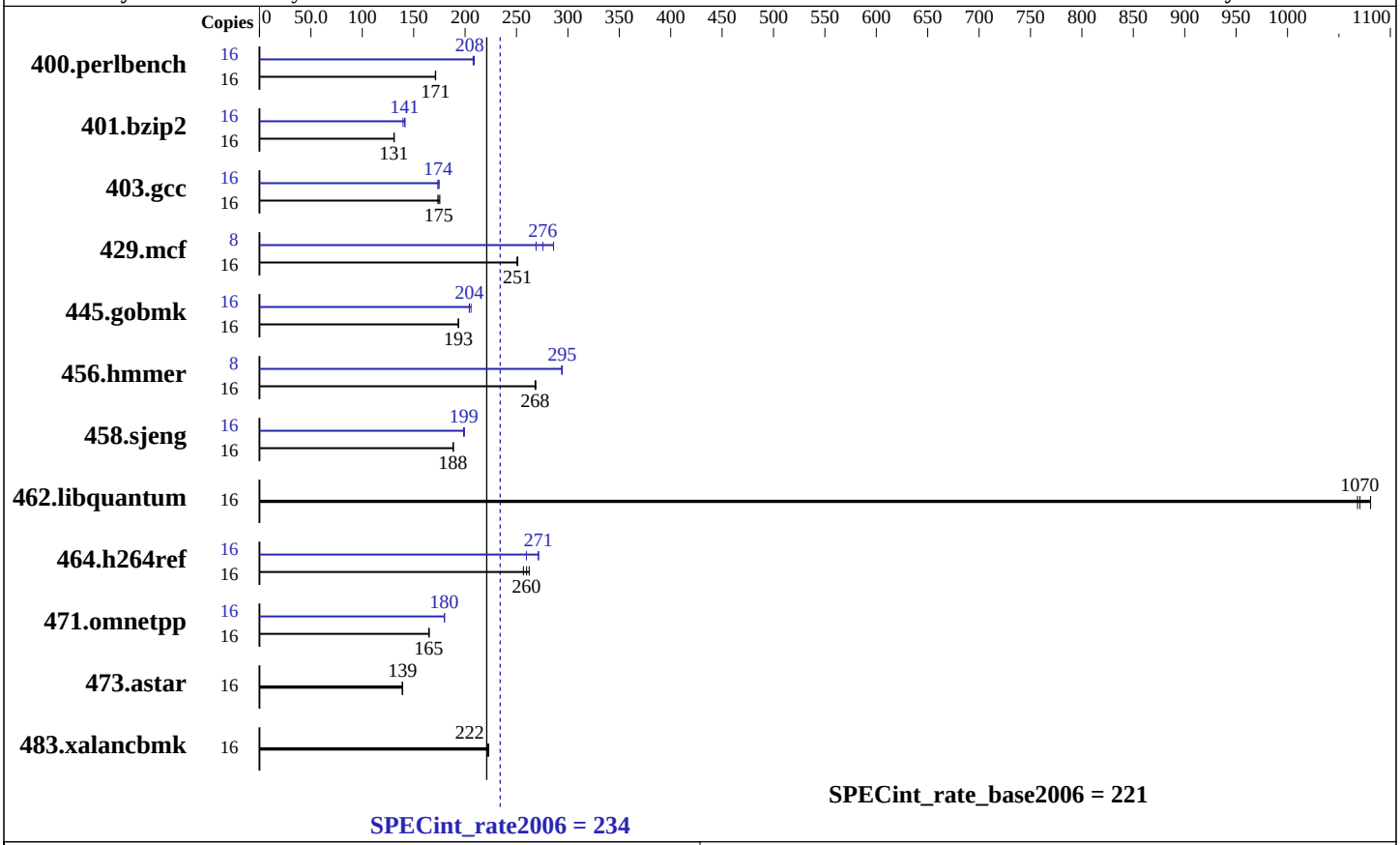
Cisco UCS C200 M2 (Intel Xeon E5620, 2.40 GHz)

SPECint®_rate2006 = 234

SPECint_rate_base2006 = 221

CPU2006 license: 9019
Test sponsor: Cisco Systems
Tested by: Cisco Systems

Test date: Apr-2011
Hardware Availability: Mar-2011
Software Availability: Jan-2011



Hardware

CPU Name:	Intel Xeon E5620
CPU Characteristics:	Intel Turbo Boost Technology up to 2.67 GHz
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 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 PC3L-10600R-9, ECC)
Disk Subsystem:	73 GB SAS, 15K RPM
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 11 (x86_64) with SP1, Kernel 2.6.32.12-0.7-default
Compiler:	Intel C++ Compiler XE for applications running on IA-32 Version 12.0.1.116 Build 20101116
Auto Parallel:	No
File System:	ext3
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V9.01

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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	16	914	171	**913**	**171**	912	171	16	748	209	**751**	**208**	752	208
401.bzip2	16	**1179**	**131**	1181	131	1178	131	16	**1094**	**141**	1090	142	1106	140
403.gcc	16	734	175	742	173	**738**	**175**	16	**742**	**174**	742	174	737	175
429.mcf	16	583	250	581	251	**582**	**251**	8	271	269	255	286	**265**	**276**
445.gobmk	16	867	194	**868**	**193**	868	193	16	816	206	822	204	**822**	**204**
456.hmmer	16	557	268	**557**	**268**	555	269	8	254	294	253	295	**253**	**295**
458.sjeng	16	1028	188	**1028**	**188**	1026	189	16	**974**	**199**	971	199	975	199
462.libquantum	16	307	1080	**310**	**1070**	310	1070	16	307	1080	**310**	**1070**	310	1070
464.h264ref	16	1350	262	**1363**	**260**	1379	257	16	1304	272	**1306**	**271**	1364	260
471.omnetpp	16	606	165	607	165	**607**	**165**	16	**556**	**180**	556	180	555	180
473.astar	16	809	139	**807**	**139**	806	139	16	809	139	**807**	**139**	806	139
483.xalancbmk	16	**496**	**222**	495	223	496	222	16	**496**	**222**	495	223	496	222

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

```
BIOS Configuration : Data Reuse Optimization = Disabled
```

General Notes

```
Binaries compiled on RHEL5.5 with
binutils-2.17.50.0.6-14.el5
```

Base Compiler Invocation

C benchmarks:

```
icc  -m32 -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT
```

C++ benchmarks:

```
icpc -m32 -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT
```

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`

C++ benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs`
`-L/smartheap -lsmartheap`

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):
`icc -m64`
`-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

403.gcc: `icc -m32`
`-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT`

429.mcf: `icc -m32`

445.gobmk: `icc -m32`

462.libquantum: `icc -m32`
`-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT`

464.h264ref: `icc -m32`

C++ benchmarks (except as noted below):
`icpc -m32 -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT`

471.omnetpp: `icpc -m32`

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)

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

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

429.mcf: -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 -auto-ilp32

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

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

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll2 -ansi-alias

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/smartheap -lsmartheap

473.astar: basepeak = yes

Continued on next page

Peak Optimization Flags (Continued)

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-ic12.0-linux64-revA.20110303.02.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.20110303.02.xml`

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