



SPEC[®] CINT2006 Result

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Unisys Corporation Forward! 2100 (2-core partition)

SPECint[®]_rate2006 = 103

SPECint_rate_base2006 = 99.3

CPU2006 license: 15

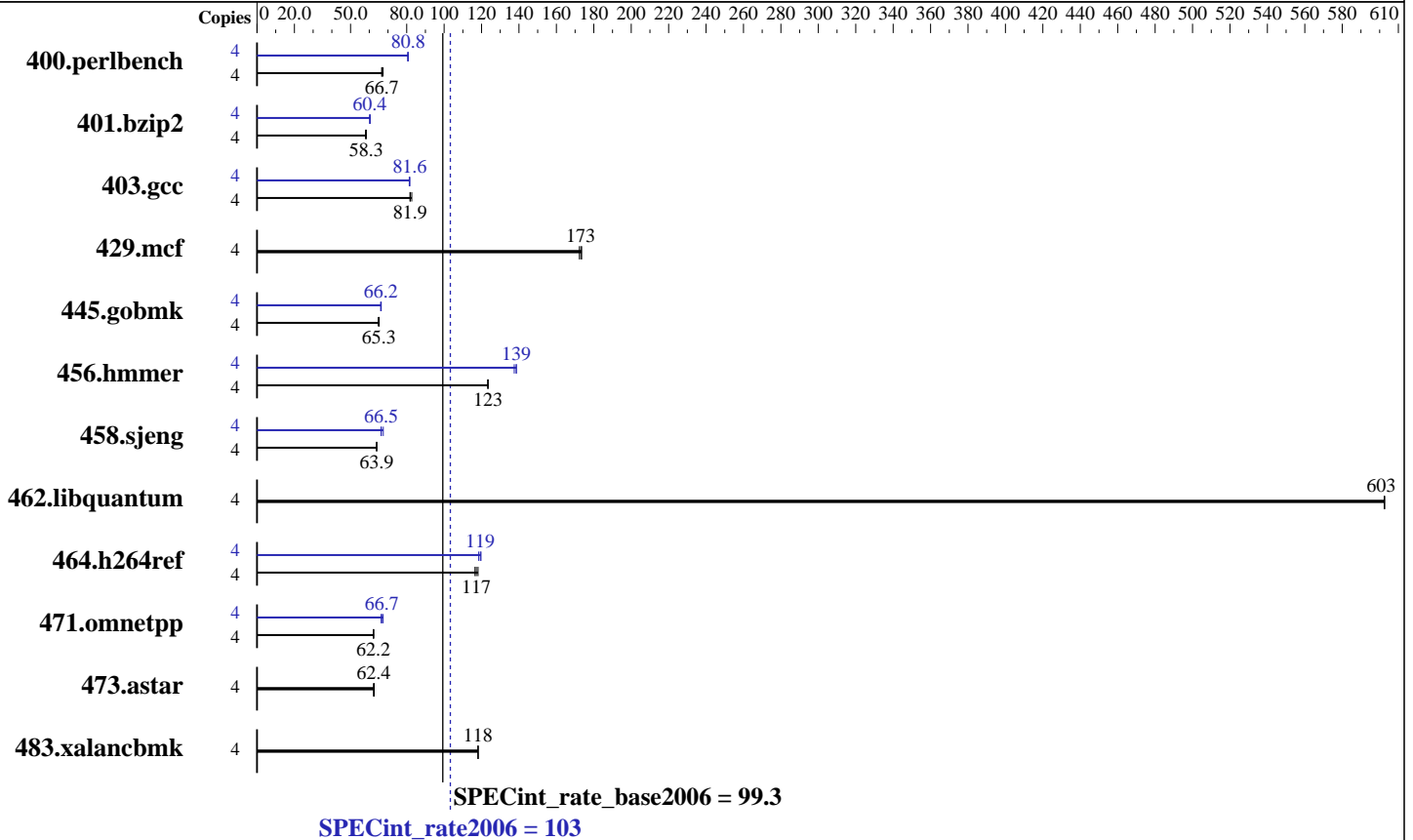
Test sponsor: Unisys Corporation

Tested by: Unisys Corporation

Test date: May-2014

Hardware Availability: Jun-2014

Software Availability: Jun-2014



Hardware

CPU Name: Intel Xeon E5-2690 v2
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 10 cores/chip, 2 threads/core
 CPU(s) orderable: 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: 25 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (8 x 16 GB 2Rx4 PC3-12800R-11, ECC) 8 GB allocated to partition
 Disk Subsystem: 8 x 600 GB 15K SAS RAID-DP
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64) 3.0.76-0.11-default
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
 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 V10.0



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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	4	580	67.4	586	66.7	586	66.7	4	484	80.8	485	80.6	484	80.8
401.bzip2	4	666	58.0	662	58.3	661	58.4	4	638	60.5	641	60.2	640	60.4
403.gcc	4	389	82.7	393	81.9	394	81.8	4	395	81.6	396	81.4	395	81.6
429.mcf	4	212	172	211	173	210	174	4	212	172	211	173	210	174
445.gobmk	4	643	65.3	643	65.3	648	64.8	4	634	66.2	632	66.4	634	66.2
456.hammer	4	302	123	302	124	303	123	4	269	139	271	137	269	139
458.sjeng	4	757	63.9	757	63.9	756	64.0	4	717	67.5	728	66.5	730	66.3
462.libquantum	4	138	603	138	602	138	603	4	138	603	138	602	138	603
464.h264ref	4	755	117	760	117	749	118	4	739	120	747	119	742	119
471.omnetpp	4	402	62.2	400	62.4	402	62.2	4	377	66.4	375	66.7	371	67.4
473.astar	4	448	62.6	450	62.4	450	62.3	4	448	62.6	450	62.4	450	62.3
483.xalancbmk	4	234	118	234	118	234	118	4	234	118	234	118	234	118

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

Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

Sysinfo program /opt/cpu2006.1.2/config/sysinfo.rev6818
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ f4f716b9827353cbfdded47e832667cd7
running on SPEC-AS Tue May 27 06:53:48 2014

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:
<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

From /proc/cpuinfo

```
model name : Intel(R) Xeon(R) CPU E5-2690 v2 @ 3.00GHz
1 "physical id"s (chips)
4 "processors"
```

cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

```
cpu cores : 2
siblings  : 4
```

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Platform Notes (Continued)

physical 0: cores 0 1
cache size : 25600 KB

From /proc/meminfo
MemTotal: 7974408 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 11 (x86_64)

From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 11 (x86_64)
VERSION = 11
PATCHLEVEL = 3

uname -a:
Linux SPEC-AS 3.0.76-0.11-default #1 SMP Fri Jun 14 08:21:43 UTC 2013
(ccab990) x86_64 x86_64 x86_64 GNU/Linux

run-level 5 May 27 06:47 last=S

SPEC is set to: /opt/cpu2006.1.2
Filesystem Type Size Used Avail Use% Mounted on
/dev/sdal ext3 296G 77G 219G 26% /opt/cpu2006.1.2

(End of data from sysinfo program)

Reporting on a 2-core, 8GB partition using
Unisys' Secure Partitioning - s-Par(R) from a 20-core, 128GB system

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/opt/cpu2006.1.2/libs/32:/opt/cpu2006.1.2/libs/64:/opt/cpu2006.1.2/sh"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RedHat EL 6.4
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

Base Compiler Invocation

C benchmarks:
icc -m32

C++ benchmarks:
icpc -m32



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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/sh -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.hmmmer: icc -m64
458.sjeng: icc -m64
C++ benchmarks:
icpc -m32

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
456.hmmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64

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Peak Portability Flags (Continued)

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)
-auto-ilp32
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: basepeak = yes
445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -opt-mem-layout-trans=3
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/sh -lsmartheap
473.astar: basepeak = yes
483.xalancbmk: basepeak = yes



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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/Intel-ic14.0-official-linux64.20140128.html>
<http://www.spec.org/cpu2006/flags/Unisys-Platform-Settings-V1.2-revA.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>
<http://www.spec.org/cpu2006/flags/Unisys-Platform-Settings-V1.2-revA.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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