SPEC® CINT2006 Result

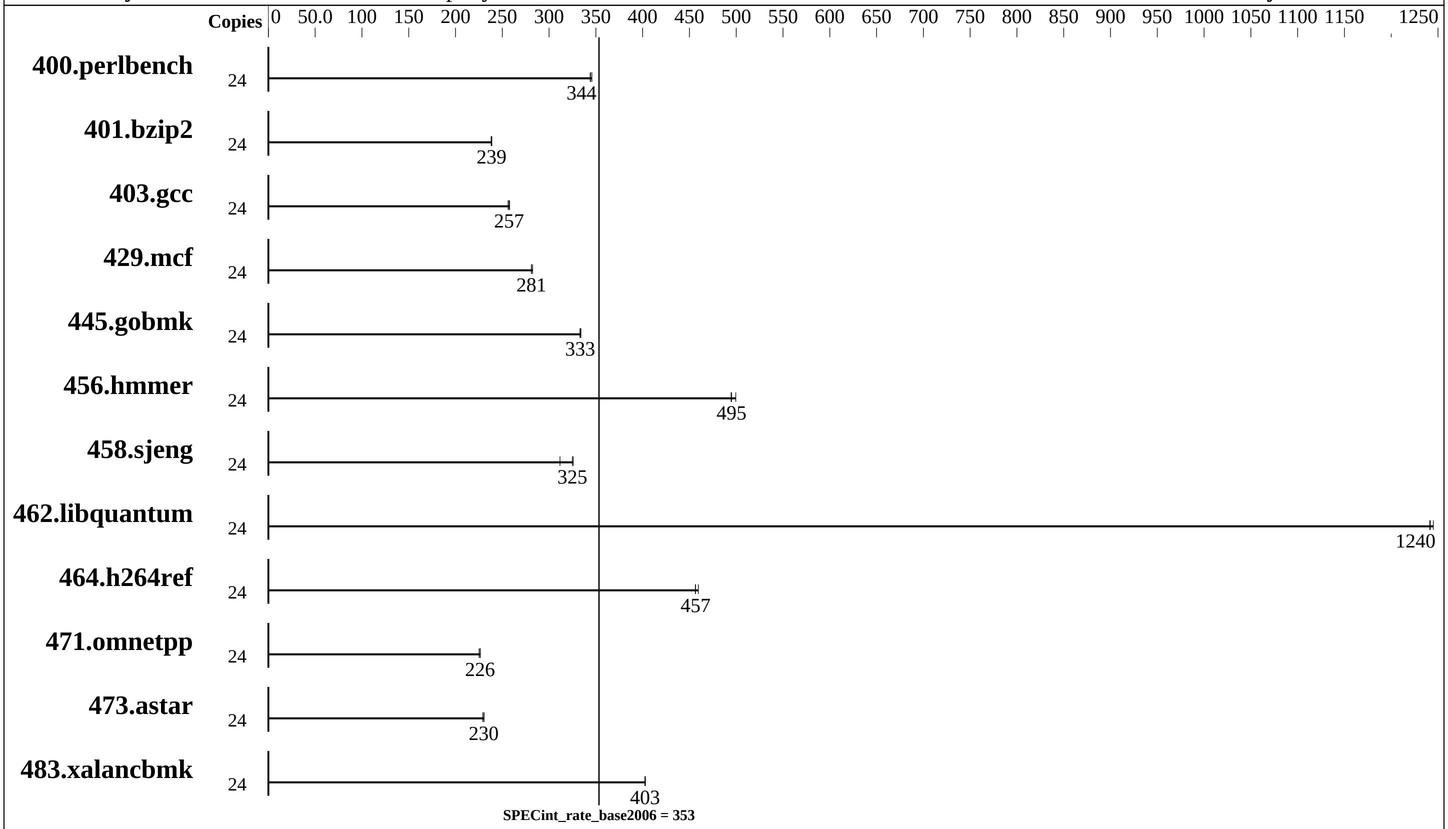
Hewlett-Packard Company

ProLiant SL165s G7
(2.30 GHz AMD Opteron 6176)

SPECint®_rate2006 = Not Run

SPECint_rate_base2006 = 353

CPU2006 license: 3		**Test date:**	Jan-2012
Test sponsor:	Hewlett-Packard Company	**Hardware Availability:**	Feb-2011
Tested by:	Hewlett-Packard Company	**Software Availability:**	Jul-2011



Hardware

CPU Name:	AMD Opteron 6176
CPU Characteristics:	
CPU MHz:	2300
FPU:	Integrated
CPU(s) enabled:	24 cores, 2 chips, 12 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	512 KB I+D on chip per core
L3 Cache:	12 MB I+D on chip per chip, 6 MB shared / 6 cores
Other Cache:	None
Memory:	128 GB (16 x 8 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem:	1 x 500 GB 7.2 K SATA
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 11 (x86_64) SP1 Kernel 2.6.32.12-0.7-default
Compiler:	C/C++: Version 4.2.5.2 of x86 Open64 Compiler Suite (from AMD)
Auto Parallel:	No
File System:	ext3
System State:	Run level 3 (multi-user)
Base Pointers:	32/64-bit
Peak Pointers:	Not Applicable
Other Software:	SmartHeap 8.1 32-bit Library for Linux

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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	678	346	**681**	**344**	682	344							
401.bzip2	24	970	239	973	238	**971**	**239**							
403.gcc	24	754	256	**751**	**257**	749	258							
429.mcf	24	775	282	779	281	**779**	**281**							
445.gobmk	24	756	333	754	334	**755**	**333**							
456.hmmer	24	453	494	**452**	**495**	448	500							
458.sjeng	24	891	326	**894**	**325**	932	312							
462.libquantum	24	399	1250	401	1240	**400**	**1240**							
464.h264ref	24	1156	460	1164	456	**1163**	**457**							
471.omnetpp	24	**663**	**226**	662	227	666	225							
473.astar	24	**732**	**230**	736	229	731	230							
483.xalancbmk	24	411	403	**411**	**403**	411	402							

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.
See the configuration file for details.
```

Operating System Notes

```
'ulimit -s unlimited' was used to set environment stack size
'ulimit -l 2097152'  was used to set environment locked pages in memory limit

Set vm.nr_hugepages=10800 in /etc/sysctl.conf
mount -t hugetlbfs nodev /mnt/hugepages
```

Platform Notes

```
BIOS Configuration:
  Power Efficiency Mode set to Performance
 Sysinfo program /cpu2006_1.2/Docs/sysinfo
 $Rev: 6775 $ $Date:: 2011-08-16 #$ 8787f7622badcf24e01c368b1db4377c
 running on SL165g7-bao Wed Jan  4 16:42:11 2012

 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 : AMD Opteron(tm) Processor 6176
       2 "physical id"s (chips)
```

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Platform Notes (Continued)

```
         24 "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 : 12
         siblings  : 12
         physical 0: cores 0 1 2 3 4 5
         physical 1: cores 0 1 2 3 4 5
      cache size : 512 KB

   From /proc/meminfo
      MemTotal:       132167380 kB
      HugePages_Total:   10800
      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 = 1

   uname -a:
      Linux SL165g7-bao 2.6.32.12-0.7-default #1 SMP 2010-05-20 11:14:20 +0200
      x86_64 x86_64 x86_64 GNU/Linux

   run-level 3 Jan 4 16:40 last=S

   SPEC is set to: /cpu2006_1.2
      Filesystem     Type    Size  Used Avail Use% Mounted on
      /dev/sda3      ext3    451G   80G  348G  19% /

   (End of data from sysinfo program)
```

General Notes

```
Environment variables set by runspec before the start of the run:
HUGETLB_LIMIT = "450"
LD_LIBRARY_PATH = "/opt/x86_open64-4.2.5.2/open64-gcc-4.2.0/lib:/opt/x86_open64-4.2.5.2/open64-gcc-4.2.0/lib64/lib"

The x86 Open64 Compiler Suite is only available from (and supported by) AMD at
http://developer.amd.com/cpu/open64
```

Base Compiler Invocation

C benchmarks:
   opencc

Continued on next page

Base Compiler Invocation (Continued)

C++ benchmarks:
`openCC`

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-march=barcelona -mso -Ofast -CG:local_sched_alg=1
-INLINE:aggressive=on -IPA:plimit=8000 -IPA:small_pu=100
-HP:bdt=2m:heap=2m

C++ benchmarks:
-march=barcelona -mso -Ofast -m32 -INLINE:aggressive=on
-CG:cmp_peep=on -L/cpu2006/SmartHeap_8.1/lib -lsmartheap

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/HP-Platform-Flags-AMD-V1.2-A.html
http://www.spec.org/cpu2006/flags/x86-open64-425-flags-rate-revB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/HP-Platform-Flags-AMD-V1.2-A.xml
http://www.spec.org/cpu2006/flags/x86-open64-425-flags-rate-revB.xml

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

Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 03:38:19 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 1 February 2012.