SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

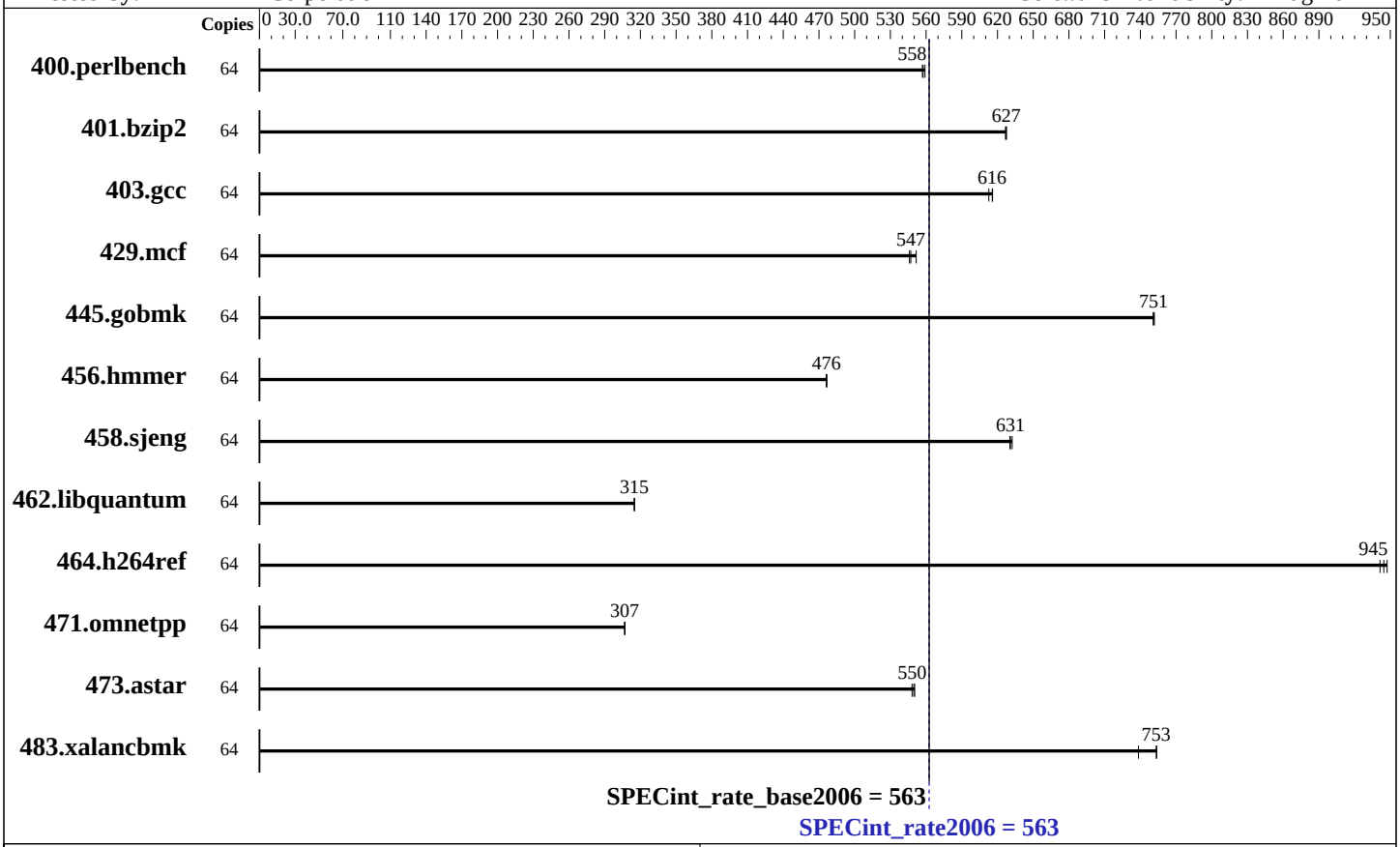
IBM Flex System p260 (4.1 GHz, 16 core, SLES, GCC)

SPECint®_rate2006 = 563

SPECint_rate_base2006 = 563

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Sep-2012
Hardware Availability: Dec-2012
Software Availability: Aug-2012



Hardware

CPU Name:	POWER7+
CPU Characteristics:	Intelligent Energy Optimization enabled, up to 4.340 GHz
CPU MHz:	4116
FPU:	Integrated
CPU(s) enabled:	16 cores, 2 chips, 8 cores/chip, 4 threads/core
CPU(s) orderable:	16 cores
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	10 MB I+D on chip per core
Other Cache:	None
Memory:	128 GB (16 x 8 GB) DDR3 1066 MHz
Disk Subsystem:	1 x 600 GB SAS SFF 10K RPM
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 11 SP2 (ppc64) 3.0.13-0.27-ppc64
Compiler:	C/C++: Version 4.7.2 of IBM Advance Toolchain 6.0-0 gcc/g++ compiler
Auto Parallel:	No
File System:	ext3
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32-bit
Other Software:	-IBM Advance Toolchain 6.0-0

SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM Flex System p260 (4.1 GHz, 16 core, SLES, GCC)

SPECint_rate2006 = 563

SPECint_rate_base2006 = 563

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Sep-2012
Hardware Availability: Dec-2012
Software Availability: Aug-2012

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	64	1123	557	1118	559	**1121**	**558**	64	1123	557	1118	559	**1121**	**558**
401.bzip2	64	**985**	**627**	986	627	984	628	64	**985**	**627**	986	627	984	628
403.gcc	64	**837**	**616**	841	613	837	616	64	**837**	**616**	841	613	837	616
429.mcf	64	**1067**	**547**	1058	552	1069	546	64	**1067**	**547**	1058	552	1069	546
445.gobmk	64	893	752	894	751	**894**	**751**	64	893	752	894	751	**894**	**751**
456.hmmer	64	1253	477	**1253**	**476**	1254	476	64	1253	477	**1253**	**476**	1254	476
458.sjeng	64	1225	632	1228	630	**1227**	**631**	64	1225	632	1228	630	**1227**	**631**
462.libquantum	64	4210	315	**4210**	**315**	4211	315	64	4210	315	**4210**	**315**	4211	315
464.h264ref	64	1505	941	1495	947	**1500**	**945**	64	1505	941	1495	947	**1500**	**945**
471.omnetpp	64	1304	307	1303	307	**1304**	**307**	64	1304	307	1303	307	**1304**	**307**
473.astar	64	816	550	**817**	**550**	820	548	64	816	550	**817**	**550**	820	548
483.xalancbmk	64	**586**	**753**	586	754	598	738	64	**586**	**753**	586	754	598	738

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

Compiler Invocation Notes

```
For more information about IBM Advance Toolchain, including support, see
ftp://linuxpatch.ncsa.uiuc.edu/toolchain/at/suse/SLES_11/at6.0/release_notes.at6.0-6.0-0.html
```

Submit Notes

```
The config file option 'submit' was used
to assign benchmark copy to specific kernel thread using
the "numactl" command (see flags file for details).
```

Operating System Notes

```
ulimit -s (stack) set to 1048576.
Large pages reserved as follows by root user:
echo 4224 > /proc/sys/vm/nr_hugepages

The following environment varibles were set before the runspec command:
  export HUGETLB_VERBOSE=0
  export HUGETLB_MORECORE=yes
```

Platform Notes

```
This Compute Node is housed in an "IBM Flex System Enterprise Chassis"
```

Base Compiler Invocation

C benchmarks:
```
/opt/at6.0/bin/gcc
```

C++ benchmarks:
```
/opt/at6.0/bin/g++
```

Base Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_PPC`
462.libquantum: `-DSPEC_CPU_LINUX`
464.h264ref: `-fsigned-char`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Base Optimization Flags

C benchmarks:
```
-O3 -mcpu=power7 -mtune=power7 -m32 -fpeel-loops -funroll-loops
-ffast-math -ftree-vectorize -mvsx -maltivec -mpopcntd -mrecip=rsqrt
-flto -fwhole-program -fuse-linker-plugin -lhugetlbfs
```

C++ benchmarks:
```
-O3 -mcpu=power7 -mtune=power7 -m32 -fpeel-loops -funroll-loops
-ffast-math -ftree-vectorize -mvsx -maltivec -mpopcntd -mrecip=rsqrt
-flto -fwhole-program -fuse-linker-plugin -ltcmalloc
```

Peak Optimization Flags

C benchmarks:

400.perlbench: `basepeak = yes`
401.bzip2: `basepeak = yes`
403.gcc: `basepeak = yes`
429.mcf: `basepeak = yes`
445.gobmk: `basepeak = yes`
456.hmmer: `basepeak = yes`
458.sjeng: `basepeak = yes`

Continued on next page

Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: basepeak = yes

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/IBM-Power.20121205.html
http://www.spec.org/cpu2006/flags/IBM-Linux-AT.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/IBM-Power.20121205.xml
http://www.spec.org/cpu2006/flags/IBM-Linux-AT.xml

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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 13:28:23 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 4 December 2012.