SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

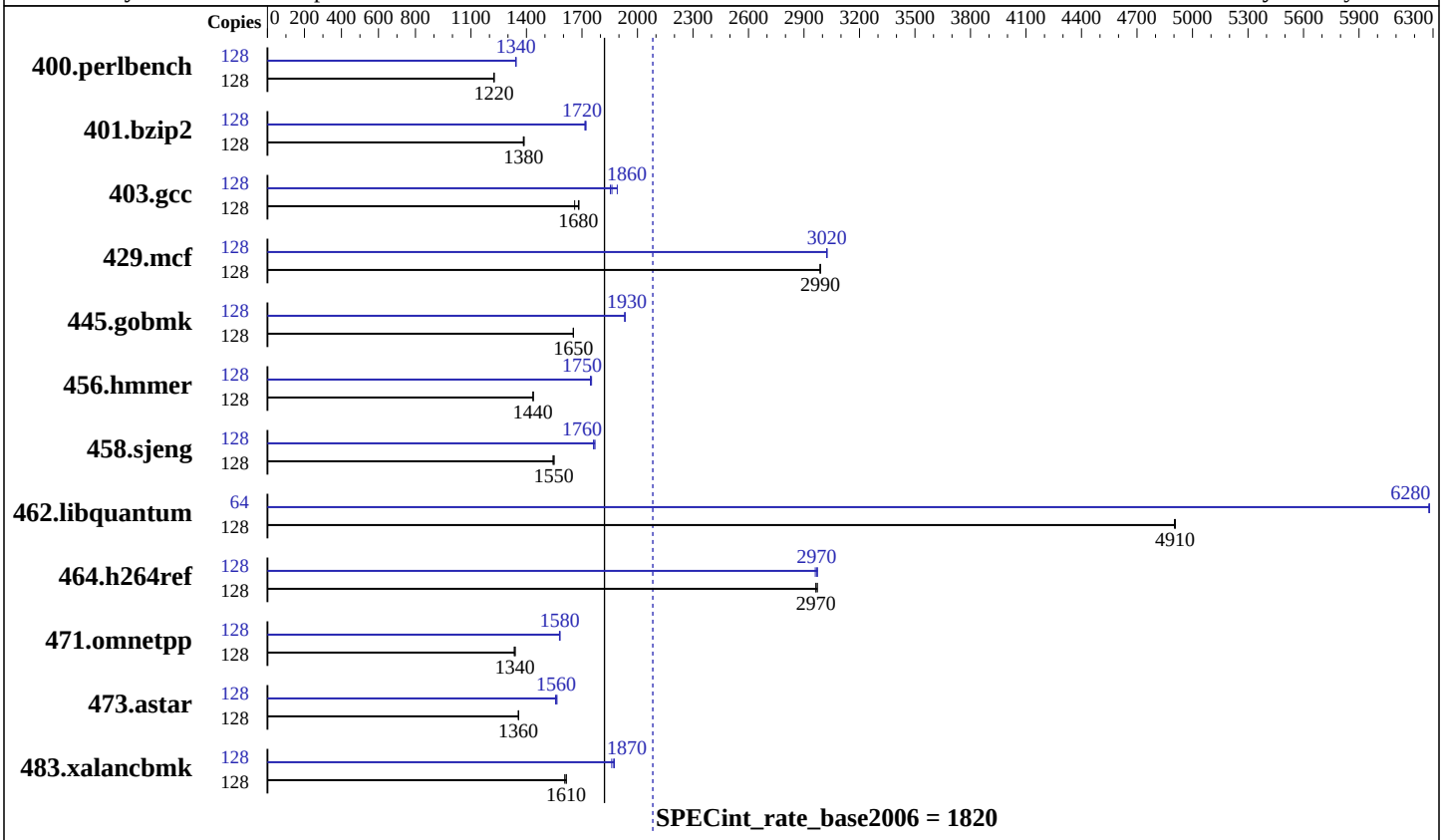
IBM Power 595 (5.0 GHz, 64 core)

SPECint®_rate2006 = 2080

SPECint_rate_base2006 = 1820

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

Test date: Mar-2008
Hardware Availability: Jun-2008
Software Availability: May-2008



Hardware

CPU Name:	POWER6
CPU Characteristics:	
CPU MHz:	5000
FPU:	Integrated
CPU(s) enabled:	64 cores, 32 chips, 2 cores/chip, 2 threads/core
CPU(s) orderable:	8,16,24,32,40,48,56,64 cores
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per core
L3 Cache:	32 MB I+D off chip per chip
Other Cache:	None
Memory:	512 GB (256x2 GB) DDR2 667 MHz
Disk Subsystem:	4x146 GB SCSI 15K RPM
Other Hardware:	None

Software

Operating System:	IBM AIX V6.1 with the 6100-01 Technology Level
Compiler:	XL C/C++ Enterprise Edition V9 for AIX Updated with the Oct2007 PTF.
Auto Parallel:	No
File System:	AIX/JFS2
System State:	Multi-user
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	--

SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM Power 595 (5.0 GHz, 64 core)

SPECint_rate2006 = 2080

SPECint_rate_base2006 = 1820

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

Test date: Mar-2008
Hardware Availability: Jun-2008
Software Availability: May-2008

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	128	1021	1220	1021	1230	**1021**	**1220**	128	931	1340	**931**	**1340**	932	1340
401.bzip2	128	**892**	**1380**	890	1390	893	1380	128	**719**	**1720**	717	1720	720	1720
403.gcc	128	621	1660	**613**	**1680**	612	1680	128	**553**	**1860**	545	1890	556	1850
429.mcf	128	**391**	**2990**	391	2990	391	2990	128	386	3020	386	3020	**386**	**3020**
445.gobmk	128	812	1650	**812**	**1650**	812	1650	128	**695**	**1930**	695	1930	695	1930
456.hmmer	128	832	1440	**832**	**1440**	832	1440	128	**684**	**1750**	682	1750	684	1750
458.sjeng	128	1000	1550	1004	1540	**1000**	**1550**	128	**878**	**1760**	879	1760	875	1770
462.libquantum	128	**541**	**4910**	541	4900	541	4910	64	**211**	**6280**	211	6280	211	6280
464.h264ref	128	955	2960	**955**	**2970**	953	2970	128	953	2970	957	2960	**954**	**2970**
471.omnetpp	128	600	1330	**598**	**1340**	598	1340	128	507	1580	**506**	**1580**	506	1580
473.astar	128	**662**	**1360**	662	1360	663	1360	128	**576**	**1560**	577	1560	574	1560
483.xalancbmk	128	550	1610	547	1620	**547**	**1610**	128	475	1860	471	1870	**472**	**1870**

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

General Notes

```
See flags file of details on following settings.
all ulimits set to unlimited.
Envionment variables set before executing benchmarks:
  MALLOCOPTIONS=pool
  MEMORY_AFFINITY=MCM
  XLFRTEOPTS=intrinthds=1
System set to "Enhanced" mode when defining partition on HMC.
bindprocessor command used on submit to bind each copy to a
  unique processor.
12800 16M large pages defined with vmo command
Remote console disabled in /etc/inittab.
fdpr binary optimization tool used for:
  400.perlbench 401.bzip2 403.gcc 429.mcf 456.hmmer
  458.sjent 462.libquantum 464.h264ref 473.astar
```

Base Compiler Invocation

C benchmarks:

```
/usr/vac/bin/xlc -qlanglvl=extc99
```

C++ benchmarks:

```
/usr/vacpp/bin/xlC
```

Base Portability Flags

400.perlbench: -DSPEC_CPU_AIX
462.libquantum: -DSPEC_CPU_AIX
464.h264ref: -DSPEC_CPU_AIX -qchars=signed
483.xalancbmk: -DSPEC_CPU_AIX

Base Optimization Flags

C benchmarks:
-bmaxdata:0x50000000 -O5 -qlargepage -D_ILS_MACROS -qalias=noansi -qalloca -blpdata

C++ benchmarks:
-bmaxdata:0x20000000 -O5 -qlargepage -D_ILS_MACROS -qrtti=all -blpdata

Base Other Flags

C benchmarks:
-qipa=noobject -qipa=threads -qsuppress=1500-036

C++ benchmarks:
-qipa=noobject -qipa=threads -qsuppress=1500-036

Peak Compiler Invocation

C benchmarks:
/usr/vac/bin/xlc -qlanglvl=extc99

C++ benchmarks:
/usr/vacpp/bin/xlC

Peak Portability Flags

400.perlbench: -DSPEC_CPU_AIX
403.gcc: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_AIX
464.h264ref: -DSPEC_CPU_AIX -qchars=signed
483.xalancbmk: -DSPEC_CPU_AIX

Peak Optimization Flags

C benchmarks:

400.perlbench: `-bmaxdata:0x50000000 -qpdf1`(pass 1) `-qpdf2`(pass 2) `-O4 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS -qalias=noansi -qfdpr -blpdata`

401.bzip2: `-bmaxdata:0x4ffffffc -qpdf1`(pass 1) `-qpdf2`(pass 2) `-O5 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS -qfdpr -blpdata`

403.gcc: `-qpdf1`(pass 1) `-qpdf2`(pass 2) `-O4 -qlargepage -D_ILS_MACROS -qalloca -qfdpr -q64 -blpdata`

429.mcf: `-bmaxdata:0x50000000 -O5 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS -qfdpr -blpdata`

445.gobmk: `-qpdf1`(pass 1) `-qpdf2`(pass 2) `-O4 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS -blpdata`

456.hmmer: `-O5 -qlargepage -D_ILS_MACROS -qfdpr -blpdata`

458.sjeng: `-qpdf1`(pass 1) `-qpdf2`(pass 2) `-O5 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS -qfdpr -blpdata`

462.libquantum: `-qpdf1`(pass 1) `-qpdf2`(pass 2) `-O5 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS -q64 -qfdpr -blpdata`

464.h264ref: `-qpdf1`(pass 1) `-qpdf2`(pass 2) `-O5 -q64 -D_ILS_MACROS -qenablevmx -qvecnvol -qfdpr -bdatapsize:64K -bstackpsize:64K -btextpsize:64K`

C++ benchmarks:

471.omnetpp: `-bmaxdata:0x20000000 -qpdf1`(pass 1) `-qpdf2`(pass 2) `-O5 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS -qalign=natural -qrtti=all -qinlglue -blpdata`

473.astar: `-bmaxdata:0x20000000 -qpdf1`(pass 1) `-qpdf2`(pass 2) `-O5 -qlargepage -D_ILS_MACROS -qfdpr -qinlglue -qalign=natural -blpdata`

483.xalancbmk: `-bmaxdata:0x20000000 -qpdf1`(pass 1) `-qpdf2`(pass 2) `-O5 -qlargepage -D_ILS_MACROS -qinlglue -D__IBM_FAST_VECTOR -blpdata`

Peak Other Flags

C benchmarks:
```
-qipa=noobject -qipa=threads -qsuppress=1500-036
```

C++ benchmarks:
```
-qipa=noobject -qipa=threads -qsuppress=1500-036
```

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/IBM-AIX-XL.20090714.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/IBM-AIX-XL.20090714.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 v1.0.
Report generated on Tue Jul 22 16:56:25 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 29 April 2008.