



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint®_rate2006 = 239

IBM Power 710 Express (3.7 GHz, 6 core)

SPECint_rate_base2006 = 210

CPU2006 license: 11

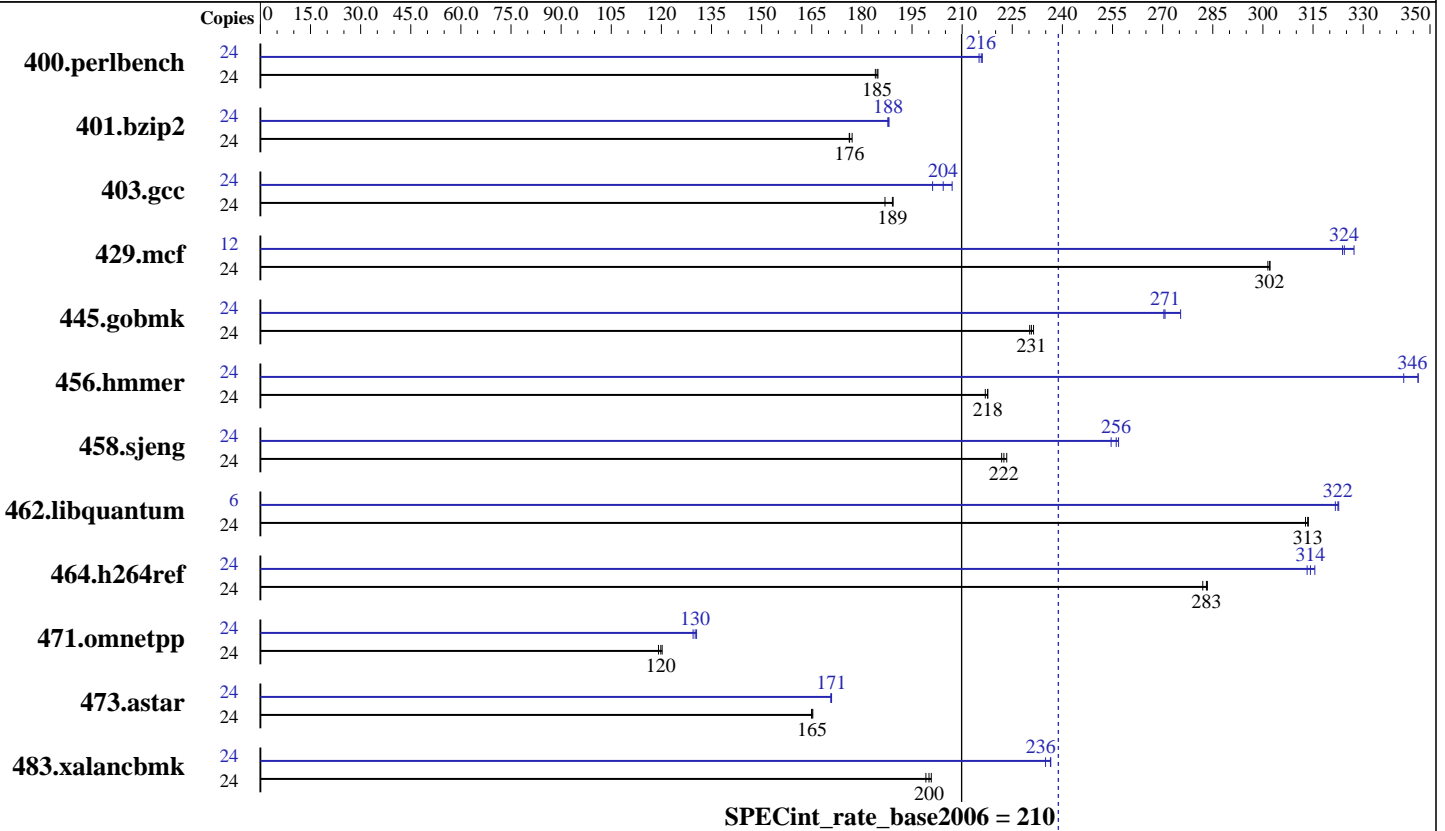
Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Aug-2010

Hardware Availability: Sep-2010

Software Availability: Sep-2010



Hardware

CPU Name: POWER7
 CPU Characteristics: Intelligent Energy Optimization enabled, up to 3.92 GHz
 CPU MHz: 3724
 FPU: Integrated
 CPU(s) enabled: 6 cores, 1 chip, 6 cores/chip, 4 threads/core
 CPU(s) orderable: 6 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: 4 MB I+D on chip per core
 Other Cache: None
 Memory: 64 GB (8 x 8 GB) DDR3 1066 MHz
 Disk Subsystem: 2x146.8 GB SAS SFF 15K RPM
 Other Hardware: None

Software

Operating System: IBM AIX V7.1
 Compiler: IBM XL C/C++ for AIX, V11.1
 Version: 11.01.0000.0002
 Auto Parallel: No
 File System: AIX/JFS2
 System State: Multi-user
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: None



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint_rate2006 = 239

IBM Power 710 Express (3.7 GHz, 6 core)

SPECint_rate_base2006 = 210

CPU2006 license: 11

Test date: Aug-2010

Test sponsor: IBM Corporation

Hardware Availability: Sep-2010

Tested by: IBM Corporation

Software Availability: Sep-2010

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	1269	185	1274	184	<u>1271</u>	<u>185</u>	24	1090	215	<u>1087</u>	<u>216</u>	1085	216
401.bzip2	24	<u>1314</u>	<u>176</u>	1314	176	1308	177	24	1231	188	1233	188	<u>1233</u>	<u>188</u>
403.gcc	24	<u>1022</u>	<u>189</u>	1034	187	1020	189	24	<u>946</u>	<u>204</u>	933	207	960	201
429.mcf	24	724	302	726	301	<u>725</u>	<u>302</u>	12	<u>337</u>	<u>324</u>	334	327	338	324
445.gobmk	24	<u>1091</u>	<u>231</u>	1094	230	1088	231	24	<u>930</u>	<u>271</u>	914	275	931	270
456.hmmer	24	<u>1029</u>	<u>218</u>	1029	218	1032	217	24	654	342	<u>646</u>	<u>346</u>	646	346
458.sjeng	24	<u>1305</u>	<u>222</u>	1309	222	1300	223	24	<u>1134</u>	<u>256</u>	1141	255	1131	257
462.libquantum	24	1586	314	<u>1587</u>	<u>313</u>	1590	313	6	386	322	385	323	<u>386</u>	<u>322</u>
464.h264ref	24	1883	282	1874	283	<u>1876</u>	<u>283</u>	24	1683	316	1696	313	<u>1690</u>	<u>314</u>
471.omnetpp	24	1248	120	1259	119	<u>1252</u>	<u>120</u>	24	1158	129	<u>1153</u>	<u>130</u>	1149	131
473.astar	24	1019	165	1022	165	<u>1021</u>	<u>165</u>	24	986	171	<u>986</u>	<u>171</u>	987	171
483.xalancbmk	24	<u>828</u>	<u>200</u>	825	201	832	199	24	705	235	<u>700</u>	<u>236</u>	700	237

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

Peak Tuning Notes

fdpr binary optimization tool used for 401.bzip2
with options -O4 -sdp 9 -rtb -vrox -nodp -m power7
fdpr binary optimization tool used for:
403.gcc 429.mcf 445.gobmk 458.sjeng
with options -O3 -m power7
fdpr binary optimization tool used for 456.hmmer
with options -O3 -lu -l -nodp -sdp 9 -m power7
fdpr binary optimization tool used for 462.libquantum
with options -O4 -nodp -m power7
fdpr binary optimization tool used for 471.omnetpp
with options -O4 -nodp -m power7 -vrox
fdpr binary optimization tool used for 473.astar
with options -O4 -sdp 9 -vrox -dp -m power7

Submit Notes

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

Operating System Notes

Environment variables set by runspec before the start of the run:
MALLOCOPTIONS = "pool"
MEMORY_AFFINITY = "MCM"
XLFRTEOPTS = "intrinths=1"

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint_rate2006 = 239

IBM Power 710 Express (3.7 GHz, 6 core)

SPECint_rate_base2006 = 210

CPU2006 license: 11

Test date: Aug-2010

Test sponsor: IBM Corporation

Hardware Availability: Sep-2010

Tested by: IBM Corporation

Software Availability: Sep-2010

Operating System Notes (Continued)

All ulimits set to unlimited.
6400 16M large pages defined with vmo command
See the flags file for details on settings.

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:
-qipa=threads -bmaxdata:0x50000000 -O5 -qlargepage -qsimd -qvecnvml
-D_ILS_MACROS -qalias=noansi -qalloca -blpdata

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

Base Other Flags

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

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

Peak Compiler Invocation

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

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint_rate2006 = 239

IBM Power 710 Express (3.7 GHz, 6 core)

SPECint_rate_base2006 = 210

CPU2006 license: 11

Test date: Aug-2010

Test sponsor: IBM Corporation

Hardware Availability: Sep-2010

Tested by: IBM Corporation

Software Availability: Sep-2010

Peak Compiler Invocation (Continued)

C++ benchmarks:

/usr/vacpp/bin/xlC

Peak Portability Flags

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

Peak Optimization Flags

C benchmarks:

400.perlbench: -qipa=threads -bmaxdata:0x50000000 -qpdf1(pass 1)
-qpdf2(pass 2) -O2 -qarch=auto -qtune=auto -D_ILS_MACROS
-qalias=noansi -blpdata -btextpsize:64K
401.bzip2: -qipa=threads -bmaxdata:0x50000000 -qpdf1(pass 1)
-qpdf2(pass 2) -O5 -qsimd -qvecnvml -qlargepage
-D_ILS_MACROS -blpdata -btextpsize:64K
403.gcc: -qipa=threads -bmaxdata:0x50000000 -qpdf1(pass 1)
-qpdf2(pass 2) -O3 -qarch=auto -qtune=auto -qlargepage
-D_ILS_MACROS -qalloca -blpdata -btextpsize:64K
429.mcf: Same as 401.bzip2
445.gobmk: -qipa=threads -qpdf1(pass 1) -qpdf2(pass 2) -O5 -qsimd
-qvecnvml -qlargepage -D_ILS_MACROS -blpdata
-btextpsize:64K
456.hmmer: -qipa=threads -O5 -qsimd -qvecnvml -qassert=refalign
-D_ILS_MACROS -blpdata -btextpsize:64K
458.sjeng: -qipa=threads -qpdf1(pass 1) -qpdf2(pass 2) -O5
-D_ILS_MACROS -blpdata -btextpsize:64K
462.libquantum: -O5 -q64 -qlargepage -D_ILS_MACROS -blpdata
-btextpsize:64K
464.h264ref: -qipa=threads -qpdf1(pass 1) -qpdf2(pass 2) -O5 -qsimd
-qvecnvml -D_ILS_MACROS -blpdata -btextpsize:64K

C++ benchmarks:

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint_rate2006 = 239

IBM Power 710 Express (3.7 GHz, 6 core)

SPECint_rate_base2006 = 210

CPU2006 license: 11

Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Aug-2010

Hardware Availability: Sep-2010

Software Availability: Sep-2010

Peak Optimization Flags (Continued)

471.omnetpp: -qipa=threads -bmaxdata:0x20000000 -qpdf1(pass 1)
-qpdf2(pass 2) -O4 -D_ILS_MACROS -qalign=natural
-qrtti=all -qinlglue -D__IBM_FAST_SET_MAP_ITERATOR
-blpdata -btextpsize:64K

473.astar: -qipa=threads -bmaxdata:0x20000000 -qpdf1(pass 1)
-qpdf2(pass 2) -O4 -qlargepage -D_ILS_MACROS -qinlglue
-qalign=natural -blpdata -btextpsize:64K

483.xalancbmk: -qipa=threads -bmaxdata:0x20000000 -qpdf1(pass 1)
-qpdf2(pass 2) -O4 -qsimd -qvecnvolve -qarch=pwr5
-qtune=pwr5 -qlargepage -D_ILS_MACROS -qinlglue
-D__IBM_FAST_VECTOR -blpdata -btextpsize:64K

Peak Other Flags

C benchmarks (except as noted below):

-qipa=noobject -qsuppress=1500-036

400.perlbench: -qsuppress=1500-036

403.gcc: -qsuppress=1500-036

462.libquantum: -qsuppress=1500-036

C++ benchmarks (except as noted below):

-qipa=noobject -qsuppress=1500-036

471.omnetpp: -qsuppress=1500-036

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/IBM-XL.20100901.html>

<http://www.spec.org/cpu2006/flags/IBM-AIX.20100303.html>

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

<http://www.spec.org/cpu2006/flags/IBM-XL.20100901.xml>

<http://www.spec.org/cpu2006/flags/IBM-AIX.20100303.xml>



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint_rate2006 = 239

IBM Power 710 Express (3.7 GHz, 6 core)

SPECint_rate_base2006 = 210

CPU2006 license: 11

Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Aug-2010

Hardware Availability: Sep-2010

Software Availability: Sep-2010

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 v1.1.
Report generated on Wed Jul 23 12:06:15 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 31 August 2010.