SPEC® CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM Power 570 (5.0 GHz, 16 core)

SPECint®_rate2006 =   542

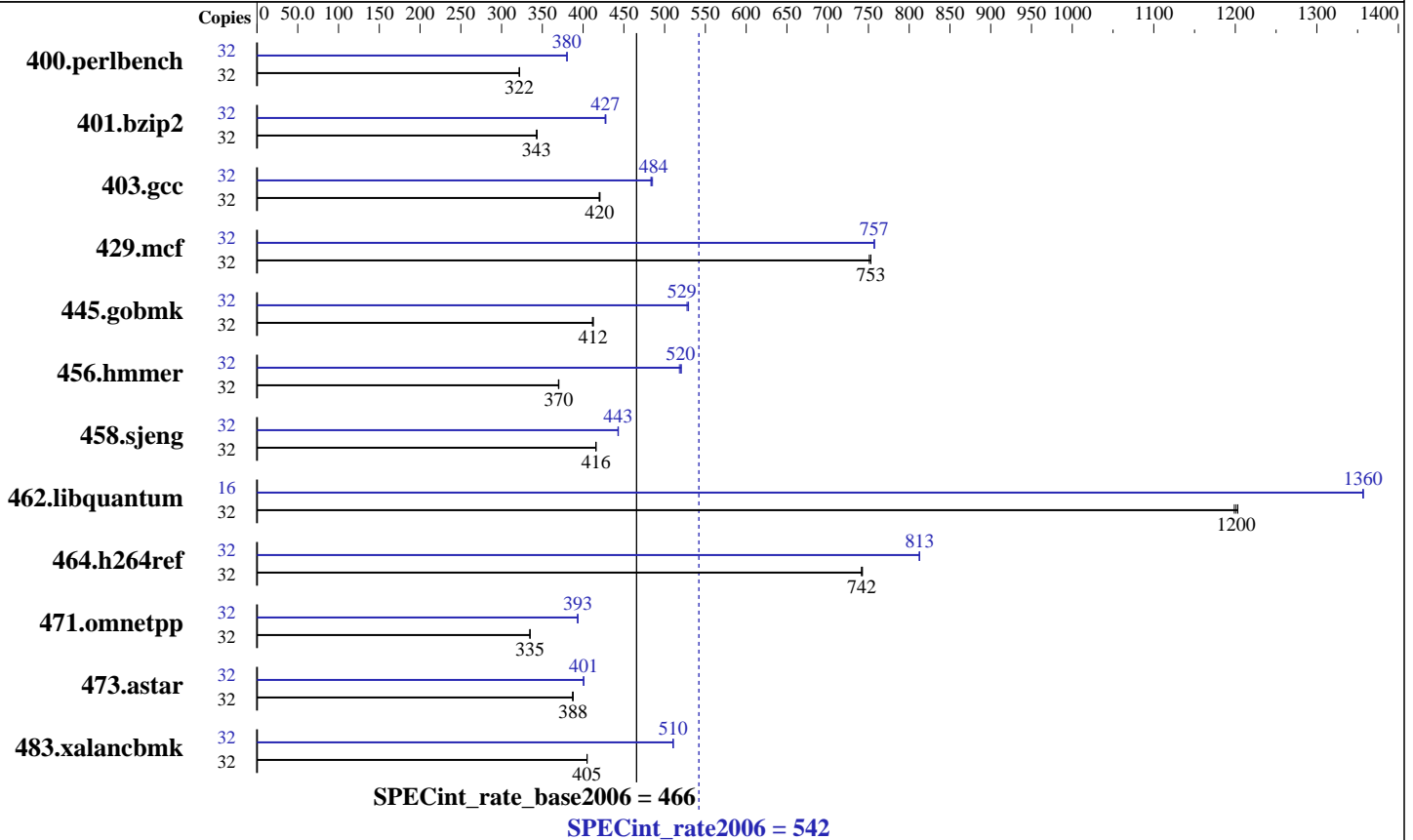SPECint_rate_base2006 =   466

CPU2006 license: 11

Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Sep-2008

Hardware Availability: Nov-2008

Software Availability: Nov-2008

Copies

Benchmark	base	peak
400.perlbench	322	380
401.bzip2	343	427
403.gcc	420	484
429.mcf	753	757
445.gobmk	412	529
456.hmmer	370	520
458.sjeng	416	443
462.libquantum	1200	1360
464.h264ref	742	813
471.omnetpp	335	393
473.astar	388	401
483.xalancbmk	405	510

SPECint_rate_base2006 = 466

SPECint_rate2006 = 542

Hardware

CPU Name:	POWER6+
CPU Characteristics:	
CPU MHz:	5000
FPU:	Integrated
CPU(s) enabled:	16 cores, 8 chips, 2 cores/chip, 2 threads/core
CPU(s) orderable:	2,4,8,12,16 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:	128 GB (64x2 GB) DDR2 667 MHz
Disk Subsystem:	4x73 GB 4x146 GB SAS 15K RPM
Other Hardware:	None

Software

Operating System:	IBM AIX V6.1 with the 6100-02 Technology Level
Compiler:	IBM XL C/C++ V10.1 for AIX
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

IBM Power 570 (5.0 GHz, 16 core)

SPECint_rate2006 =　542

SPECint_rate_base2006 = 466

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

Test date: Sep-2008
Hardware Availability: Nov-2008
Software Availability: Nov-2008

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	32	972	322	971	322	**971**	**322**	32	822	380	822	380	**822**	**380**
401.bzip2	32	**900**	**343**	901	343	899	344	32	723	427	722	428	**722**	**427**
403.gcc	32	612	421	614	420	**613**	**420**	32	**533**	**484**	533	483	531	485
429.mcf	32	389	751	**388**	**753**	388	753	32	386	757	**385**	**757**	385	757
445.gobmk	32	814	412	**814**	**412**	816	411	32	636	527	634	529	**635**	**529**
456.hmmer	32	807	370	806	370	**807**	**370**	32	576	518	**574**	**520**	574	520
458.sjeng	32	931	416	**931**	**416**	932	416	32	875	443	**874**	**443**	874	443
462.libquantum	32	553	1200	551	1200	**552**	**1200**	16	244	1360	244	1360	**244**	**1360**
464.h264ref	32	**954**	**742**	953	743	955	741	32	871	813	872	812	**871**	**813**
471.omnetpp	32	597	335	**597**	**335**	598	335	32	**508**	**393**	509	393	508	393
473.astar	32	**579**	**388**	581	387	579	388	32	561	401	**561**	**401**	561	401
483.xalancbmk	32	545	405	**545**	**405**	545	405	32	**433**	**510**	433	511	433	510

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 400.perlbench 401.bzip2 403.gcc 456.hmmer 458.sjeng
                                       464.h264ref 471.omnetpp 473.astar 483.xalancbmk
   with options -O4 -vrox -pbsi
fdpr binary optimization tool used for 445.gobmk
   with options -O3 -vrox -sdp 9
fdpr binary optimization tool used for 429.mcf
   with options -kr -lap -lro -nop -nopr -RC -tb -tlo -vro -lu 9 -rt 0.95 -sdpla 8
                -sdpms 512 -shci 15 -si -sidf 45 -siht 10 -lun 13 -m ppc405 -vrox -gcpyp
fdpr binary optimization tool used for 462.libquantum
   with options -bf -bp -dp -hr -kr -las -lro -nop -RC -RD -tlo -vro -A 32 -isf 12
                -lu 9 -rt 0.00 -ihf 20 -sdp 9 -shci 90 -si -sidf 50 -vrox -dce
```

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

```
all ulimits set to unlimited.
3200 16M large pages defined with vmo command
```

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM Power 570 (5.0 GHz, 16 core)

SPECint_rate2006 =   542

SPECint_rate_base2006 = 466

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

Test date: Sep-2008
Hardware Availability: Nov-2008
Software Availability: Nov-2008

Platform Notes

```
System set to "Enhanced" mode when defining partition on HMC.
```

General Notes

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

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

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

Base Other Flags

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

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

SPEC CINT2006 Result

IBM Corporation

IBM Power 570 (5.0 GHz, 16 core)

SPECint_rate2006 = 542

SPECint_rate_base2006 = 466

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

Test date: Sep-2008
Hardware Availability: Nov-2008
Software Availability: Nov-2008

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
        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) -O5
                       -D_ILS_MACROS -qalias=noansi -qfdpr -bdatapsize:64K
                       -bstackpsize:64K -btextpsize:64K

            401.bzip2: -bmaxdata:0x4ffffffc -qpdf1(pass 1) -qpdf2(pass 2) -O4
                       -qlargepage -D_ILS_MACROS -qfdpr -blpdata

             403.gcc: -bmaxdata:0x50000000 -qpdf1(pass 1) -qpdf2(pass 2) -O4
                      -qlargepage -D_ILS_MACROS -qalloca -qfdpr -blpdata

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

           445.gobmk: -qpdf1(pass 1) -qpdf2(pass 2) -O3 -qarch=auto -qtune=auto
                      -qlargepage -D_ILS_MACROS -qfdpr -blpdata

           456.hmmer: -qpdf1(pass 1) -qpdf2(pass 2) -O5 -qenablevmx -qvecnvol
                      -D_ILS_MACROS -qfdpr -bdatapsize:64K -bstackpsize:64K
                      -btextpsize:64K

           458.sjeng: -O5 -qlargepage -qenablevmx -qvecnvol -D_ILS_MACROS
                      -qfdpr -blpdata

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

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

Continued on next page

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM Power 570 (5.0 GHz, 16 core)

SPECint_rate2006 = 542

SPECint_rate_base2006 = 466

CPU2006 license: 11	**Test date:**	Sep-2008
Test sponsor: IBM Corporation	**Hardware Availability:**	Nov-2008
Tested by: IBM Corporation	**Software Availability:**	Nov-2008

Peak Optimization Flags (Continued)

C++ benchmarks:

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

  473.astar: -bmaxdata:0x20000000 -O5 -qlargepage -D_ILS_MACROS -qfdpr
             -qenablevmx -qvecnvol -qinlglue -qalign=natural -blpdata

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

Peak Other Flags

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

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

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/IBM-AIX.html
http://www.spec.org/cpu2006/flags/IBM-XL.20090713.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/IBM-AIX.xml
http://www.spec.org/cpu2006/flags/IBM-XL.20090713.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 v1.1.
Report generated on Tue Jul 22 20:45:58 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 29 October 2008.