



SPEC[®] CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECint[®]_rate2006 = 350

ProLiant DL580 G7
(1.86 GHz, Intel Xeon E7520)

SPECint_rate_base2006 = 326

CPU2006 license: 3

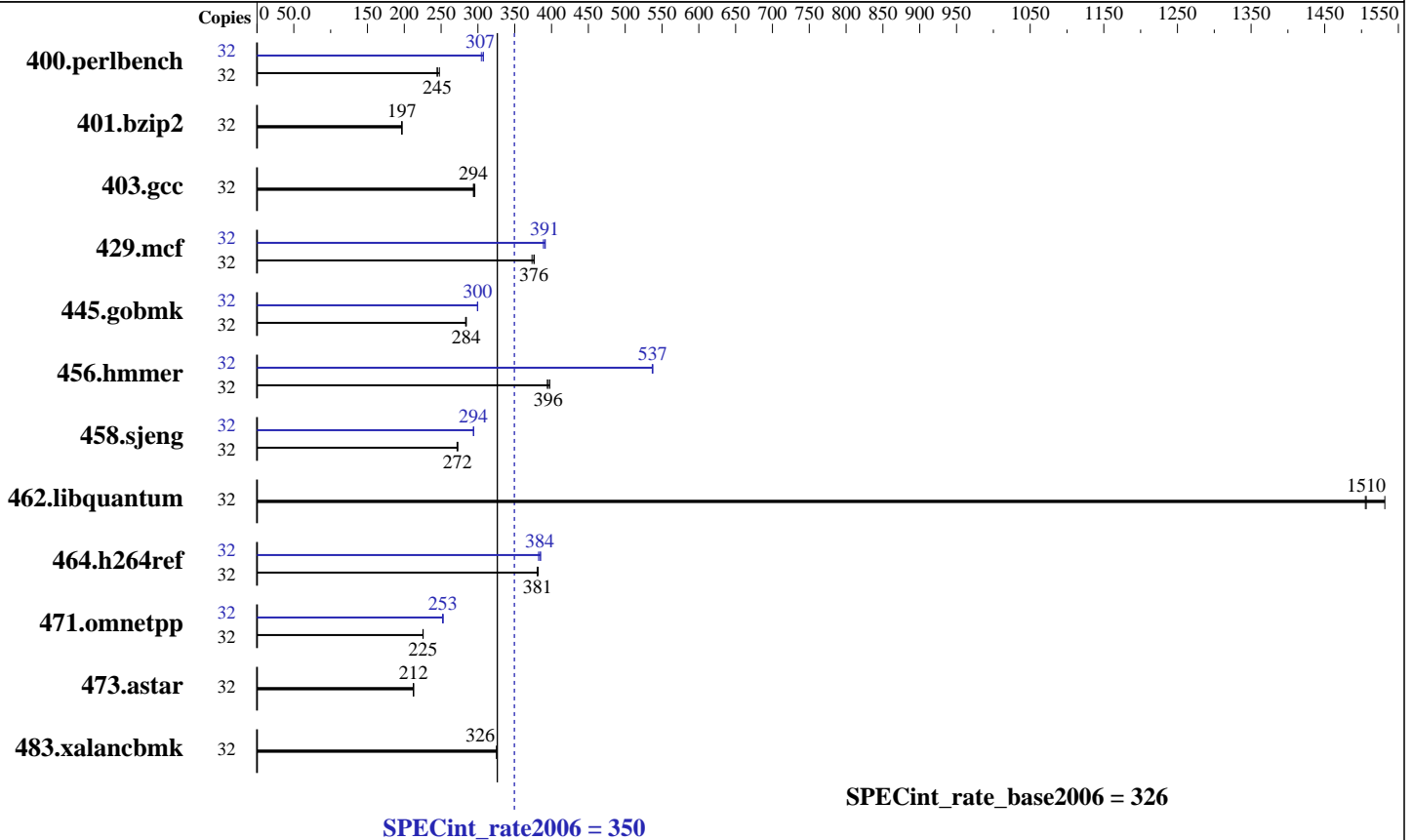
Test date: May-2011

Test sponsor: Hewlett-Packard Company

Hardware Availability: Jul-2010

Tested by: Hewlett-Packard Company

Software Availability: Dec-2010



Hardware

CPU Name: Intel Xeon E7520
 CPU Characteristics:
 CPU MHz: 1867
 FPU: Integrated
 CPU(s) enabled: 16 cores, 4 chips, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 2,4 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 18 MB I+D on chip per chip
 Other Cache: None
 Memory: 1 TB (64 x 16 GB 4Rx4 PC3-8500R-7, ECC)
 Disk Subsystem: 1 x 300 GB 10 K SAS
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64),
 Kernel 2.6.27.19-5-default
 Compiler: C/C++: Version 12.0.1.116 of
 Intel C++ Compiler XE
 Build 20101116
 Auto Parallel: No
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V9.01



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant DL580 G7
(1.86 GHz, Intel Xeon E7520)

SPECint_rate2006 = 350

SPECint_rate_base2006 = 326

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: May-2011
Hardware Availability: Jul-2010
Software Availability: Dec-2010

Results Table

| Benchmark | Base | | | | | | | Peak | | | | | | |
|----------------|--------|------------|-------------|-------------|------------|-------------|------------|--------|-------------|-------------|-------------|------------|-------------|------------|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 32 | 1262 | 248 | <u>1276</u> | <u>245</u> | 1278 | 245 | 32 | 1026 | 305 | <u>1018</u> | <u>307</u> | 1017 | 307 |
| 401.bzip2 | 32 | 1569 | 197 | <u>1570</u> | <u>197</u> | 1570 | 197 | 32 | 1569 | 197 | <u>1570</u> | <u>197</u> | 1570 | 197 |
| 403.gcc | 32 | 871 | 296 | 876 | 294 | <u>876</u> | <u>294</u> | 32 | 871 | 296 | 876 | 294 | <u>876</u> | <u>294</u> |
| 429.mcf | 32 | 782 | 373 | 775 | 377 | <u>776</u> | <u>376</u> | 32 | <u>747</u> | <u>391</u> | 750 | 389 | 745 | 392 |
| 445.gobmk | 32 | 1181 | 284 | 1185 | 283 | <u>1182</u> | <u>284</u> | 32 | <u>1120</u> | <u>300</u> | 1120 | 300 | 1122 | 299 |
| 456.hammer | 32 | 751 | 398 | <u>755</u> | <u>396</u> | 757 | 394 | 32 | 556 | 537 | <u>556</u> | <u>537</u> | 556 | 537 |
| 458.sjeng | 32 | 1421 | 273 | 1425 | 272 | <u>1421</u> | <u>272</u> | 32 | 1316 | 294 | <u>1317</u> | <u>294</u> | 1317 | 294 |
| 462.libquantum | 32 | <u>440</u> | <u>1510</u> | 441 | 1510 | 433 | 1530 | 32 | <u>440</u> | <u>1510</u> | 441 | 1510 | 433 | 1530 |
| 464.h264ref | 32 | 1854 | 382 | <u>1859</u> | <u>381</u> | 1861 | 380 | 32 | 1838 | 385 | <u>1843</u> | <u>384</u> | 1852 | 382 |
| 471.omnetpp | 32 | <u>887</u> | <u>225</u> | 888 | 225 | 886 | 226 | 32 | 791 | 253 | <u>792</u> | <u>253</u> | 794 | 252 |
| 473.astar | 32 | 1059 | 212 | 1056 | 213 | <u>1057</u> | <u>212</u> | 32 | 1059 | 212 | 1056 | 213 | <u>1057</u> | <u>212</u> |
| 483.xalancbmk | 32 | <u>678</u> | <u>326</u> | 677 | 326 | 679 | 325 | 32 | <u>678</u> | <u>326</u> | 677 | 326 | 679 | 325 |

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

Operating System Notes

```
'nodev /mnt/hugepages hugetlbfs defaults 0 0' added to /etc/fstab
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
echo 14400 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so
```

Platform Notes

BIOS configuration:
HP Power Profile set to Maximum Performance
Thermal Configuration set to Increased Cooling

General Notes

Binaries were compiled on RHEL5.5



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant DL580 G7
(1.86 GHz, Intel Xeon E7520)

SPECint_rate2006 = 350

SPECint_rate_base2006 = 326

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: May-2011

Hardware Availability: Jul-2010

Software Availability: Dec-2010

Base Compiler Invocation

C benchmarks:

icc -m32

C++ benchmarks:

icpc -m32

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/smartheap -lsmartheap
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

400.perlbench: icc -m64

456.hmmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:

icpc -m32



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

SPECint_rate2006 = 350

ProLiant DL580 G7
(1.86 GHz, Intel Xeon E7520)

SPECint_rate_base2006 = 326

CPU2006 license: 3

Test date: May-2011

Test sponsor: Hewlett-Packard Company

Hardware Availability: Jul-2010

Tested by: Hewlett-Packard Company

Software Availability: Dec-2010

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
 456.hmmer: -DSPEC_CPU_LP64
 458.sjeng: -DSPEC_CPU_LP64
 462.libquantum: -DSPEC_CPU_LINUX
 483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
 -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

401.bzip2: basepeak = yes

403.gcc: basepeak = yes

429.mcf: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
 -ansi-alias -auto-ilp32

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
 -ansi-alias -auto-ilp32

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
 -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
 -unroll4 -auto-ilp32
 -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
 -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
 -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
 -L/smartheap -lsmartheap

473.astar: basepeak = yes

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Hewlett-Packard Company

ProLiant DL580 G7
(1.86 GHz, Intel Xeon E7520)

SPECint_rate2006 = 350

SPECint_rate_base2006 = 326

CPU2006 license: 3

Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: May-2011

Hardware Availability: Jul-2010

Software Availability: Dec-2010

Peak Optimization Flags (Continued)

483.xalanbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

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

<http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20110316.html>

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.html>

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

<http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20110316.xml>

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.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 Thu Jul 24 00:52:06 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 8 November 2011.