



SPEC® CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hypertechnologies Ciara, Inc Orion HF620-G3

SPECint®_rate2006 = 1310

SPECint_rate_base2006 = 1270

CPU2006 license: 4531

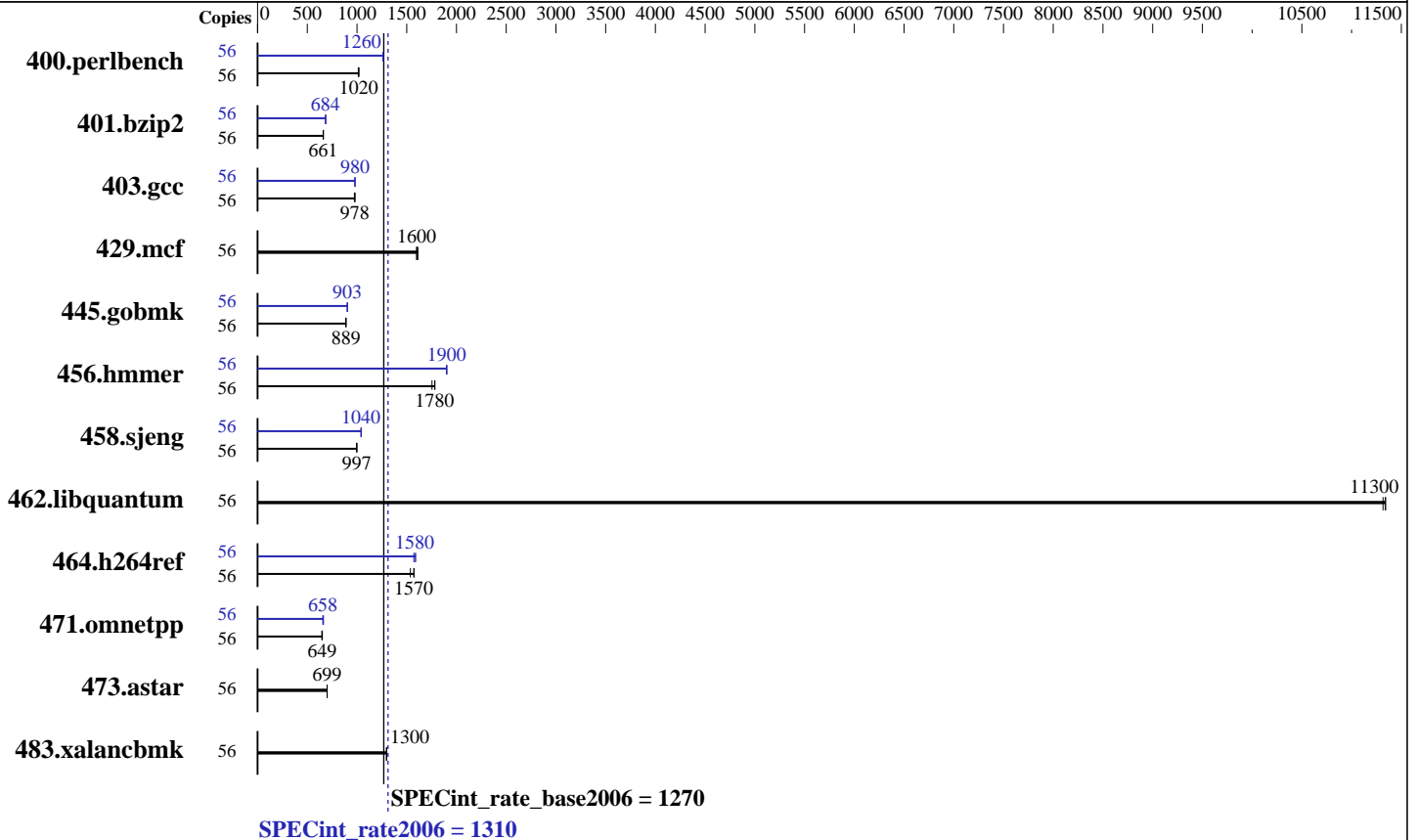
Test sponsor: Hypertechnologies Ciara, Inc

Tested by: Hypertechnologies Ciara, Inc

Test date: Nov-2014

Hardware Availability: Dec-2014

Software Availability: Aug-2015



Hardware

CPU Name: Intel Xeon E5-2697 v3
 CPU Characteristics: Intel Turbo Boost Technology disabled
 CPU MHz: 3224
 FPU: Integrated
 CPU(s) enabled: 28 cores, 2 chips, 14 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 35 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (8 x 16 GB 2Rx4 PC4-2133P-R)
 Disk Subsystem: 1x 240 GB SATA SSD
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 7.0 (Maipo)
 3.10.0-123.el7.x86_64
 Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux
 Auto Parallel: No
 File System: xfs
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.0



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hypertechnologies Ciara, Inc Orion HF620-G3

SPECint_rate2006 = 1310

SPECint_rate_base2006 = 1270

CPU2006 license: 4531

Test sponsor: Hypertechnologies Ciara, Inc

Tested by: Hypertechnologies Ciara, Inc

Test date: Nov-2014

Hardware Availability: Dec-2014

Software Availability: Aug-2015

Results Table

Benchmark	Base						Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	56	<u>539</u>	<u>1020</u>	540	1010	537	1020	56	432	1270	<u>434</u>	<u>1260</u>	434	1260
401.bzip2	56	<u>818</u>	<u>661</u>	816	662	819	659	56	<u>789</u>	<u>684</u>	789	685	790	684
403.gcc	56	<u>461</u>	<u>978</u>	463	974	460	980	56	460	980	460	979	<u>460</u>	<u>980</u>
429.mcf	56	<u>319</u>	<u>1600</u>	319	1600	317	1610	56	<u>319</u>	<u>1600</u>	319	1600	317	1610
445.gobmk	56	662	888	661	889	<u>661</u>	<u>889</u>	56	651	903	<u>651</u>	<u>903</u>	650	903
456.hammer	56	298	1750	293	1780	<u>293</u>	<u>1780</u>	56	275	1900	275	1900	<u>275</u>	<u>1900</u>
458.sjeng	56	<u>679</u>	<u>997</u>	679	998	680	997	56	<u>651</u>	<u>1040</u>	650	1040	651	1040
462.libquantum	56	<u>102</u>	<u>11300</u>	102	11300	103	11300	56	<u>102</u>	<u>11300</u>	102	11300	103	11300
464.h264ref	56	787	1570	<u>789</u>	<u>1570</u>	806	1540	56	779	1590	789	1570	<u>784</u>	<u>1580</u>
471.omnetpp	56	<u>539</u>	<u>649</u>	541	647	537	652	56	<u>532</u>	<u>658</u>	528	663	533	657
473.astar	56	561	700	562	699	<u>562</u>	<u>699</u>	56	561	700	562	699	<u>562</u>	<u>699</u>
483.xalancbmk	56	298	1300	298	1300	<u>298</u>	<u>1300</u>	56	298	1300	298	1300	<u>298</u>	<u>1300</u>

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

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

Sysinfo program /usr/cpu2006/config/sysinfo.rev6914
\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Fri Nov 21 14:37:02 2014

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:
<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E5-2697 v3 @ 2.60GHz
2 "physical id"s (chips)
56 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
cpu cores : 7
siblings : 14

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hypertechnologies Ciara, Inc
Orion HF620-G3

SPECint_rate2006 = 1310

SPECint_rate_base2006 = 1270

CPU2006 license: 4531

Test sponsor: Hypertechnologies Ciara, Inc

Tested by: Hypertechnologies Ciara, Inc

Test date: Nov-2014

Hardware Availability: Dec-2014

Software Availability: Aug-2015

Platform Notes (Continued)

```
physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
cache size : 17920 KB
```

```
From /proc/meminfo
MemTotal:      131888772 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

```
From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.0 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.0"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.0 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.0:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.0:ga:server
```

```
uname -a:
Linux localhost.localdomain 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57
EDT 2014 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Nov 21 14:30 last=5
```

```
SPEC is set to: /usr/cpu2006
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda3       xfs   234G  125G  109G  54% /
```

Additional information from dmidecode:

Warning: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

```
BIOS American Megatrends Inc. 0402 09/09/2014
Memory:
8x Micron 36ASF2G72PZ-2G1A2 16 GB 2 rank 2133 MHz
```

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64:/usr/cpu2006/sh"

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hypertechnologies Ciara, Inc
Orion HF620-G3

SPECint_rate2006 = 1310

SPECint_rate_base2006 = 1270

CPU2006 license: 4531

Test sponsor: Hypertechnologies Ciara, Inc

Tested by: Hypertechnologies Ciara, Inc

Test date: Nov-2014

Hardware Availability: Dec-2014

Software Availability: Aug-2015

General Notes (Continued)

```
memory using RedHat EL 7.0
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled
Filesystem page cache cleared with:
echo 1> /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
```

Base Compiler Invocation

C benchmarks:

```
icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

C++ benchmarks:

```
icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

Base Portability Flags

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

Base Optimization Flags

C benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3
```

C++ benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh -lsmartheap
```

Base Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

Peak Compiler Invocation

C benchmarks (except as noted below):

```
icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hypertechnologies Ciara, Inc
Orion HF620-G3

SPECint_rate2006 = 1310

SPECint_rate_base2006 = 1270

CPU2006 license: 4531

Test sponsor: Hypertechnologies Ciara, Inc

Tested by: Hypertechnologies Ciara, Inc

Test date: Nov-2014

Hardware Availability: Dec-2014

Software Availability: Aug-2015

Peak Compiler Invocation (Continued)

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:

icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64

401.bzip2: -DSPEC_CPU_LP64

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: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-auto-ilp32

401.bzip2: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-prefetch -auto-ilp32 -ansi-alias

403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll4 -auto-ilp32

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hypertechnologies Ciara, Inc
Orion HF620-G3

SPECint_rate2006 = 1310

SPECint_rate_base2006 = 1270

CPU2006 license: 4531

Test sponsor: Hypertechnologies Ciara, Inc

Tested by: Hypertechnologies Ciara, Inc

Test date: Nov-2014

Hardware Availability: Dec-2014

Software Availability: Aug-2015

Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref: -xCORE-AVX2(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: -xCORE-AVX2(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/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags file that was used to format this result can be browsed at
<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html>

You can also download the XML flags source by saving the following link:
<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.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 Wed Jun 17 10:47:42 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 16 June 2015.