



SPEC® CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hypertechnologies Ciara, Inc Orion HF620-G3

SPECint®_rate2006 = 867

SPECint_rate_base2006 = 833

CPU2006 license: 4531

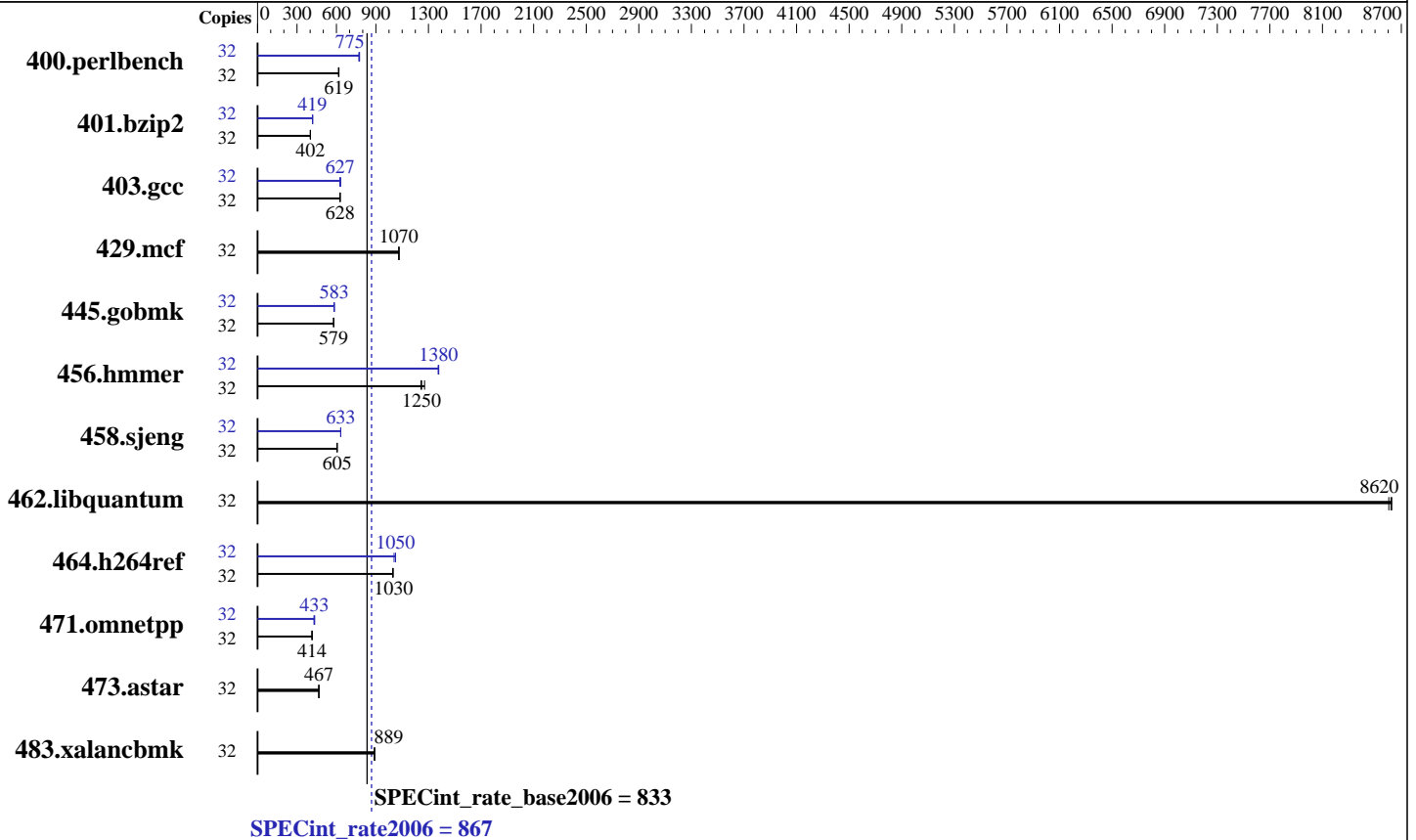
Test sponsor: Hypertechnologies Ciara, Inc

Tested by: Hypertechnologies Ciara, Inc

Test date: Nov-2014

Hardware Availability: Dec-2014

Software Availability: Aug-2015



Hardware

CPU Name: Intel Xeon E5-2667 v3
 CPU Characteristics: Intel Turbo Boost Technology disabled
 CPU MHz: 3328
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 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: 20 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)
 3.10.0-121.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 = 867
SPECint_rate_base2006 = 833

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	32	508	615	505	619	505	619	32	406	770	403	775	403	776
401.bzip2	32	767	403	771	401	768	402	32	738	419	738	419	737	419
403.gcc	32	410	628	410	628	410	628	32	407	633	411	626	411	627
429.mcf	32	272	1070	272	1070	271	1080	32	272	1070	272	1070	271	1080
445.gobmk	32	579	580	580	579	580	579	32	576	583	575	584	576	582
456.hammer	32	239	1250	240	1240	235	1270	32	217	1380	217	1370	217	1380
458.sjeng	32	640	605	639	606	640	605	32	612	632	612	633	612	633
462.libquantum	32	76.9	8620	76.9	8630	77.1	8600	32	76.9	8620	76.9	8630	77.1	8600
464.h264ref	32	687	1030	688	1030	689	1030	32	675	1050	682	1040	675	1050
471.omnetpp	32	483	414	481	416	483	414	32	466	429	461	434	462	433
473.astar	32	483	465	481	467	481	467	32	483	465	481	467	481	467
483.xalancbmk	32	248	889	248	891	248	889	32	248	889	248	891	248	889

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 orionhf620 Thu Nov 6 14:51:34 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 E5-2667 v3 @ 3.20GHz
 2 "physical id"s (chips)
 32 "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 : 8
siblings  : 16
```

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hypertechnologies Ciara, Inc
Orion HF620-G3

SPECint_rate2006 = 867
SPECint_rate_base2006 = 833

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 7
physical 1: cores 0 1 2 3 4 5 6 7
cache size : 20480 KB
```

```
From /proc/meminfo
MemTotal:      131720292 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 orionhf620 3.10.0-121.el7.x86_64 #1 SMP Tue Apr 8 10:48:19 EDT 2014
x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Nov 6 14:51 last=5
```

```
SPEC is set to: /usr/cpu2006
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdb3       xfs   233G   22G  212G  10% /
```

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

Regarding the sysinfo display about the memory installed, the correct amount of memory is 128 GB
8x Micron 36ASF2G72PZ-2G1A2 16 GB 2 rank 2133 MHz
Environment variables set by runspec before the start of the run:

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hypertechnologies Ciara, Inc
Orion HF620-G3

SPECint_rate2006 = 867
SPECint_rate_base2006 = 833

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)

```
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
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
```



SPEC CINT2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Hypertechnologies Ciara, Inc
Orion HF620-G3

SPECint_rate2006 = 867

SPECint_rate_base2006 = 833

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

C benchmarks (except as noted below):

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

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 = 867

SPECint_rate_base2006 = 833

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 10:47:40 2015 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 16 June 2015.