



SPEC® OMPG2012 Result

Copyright 2012-2017 Standard Performance Evaluation Corporation

Lenovo Global Technology ThinkSystem SR950

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 40.2

OMP2012 license:28

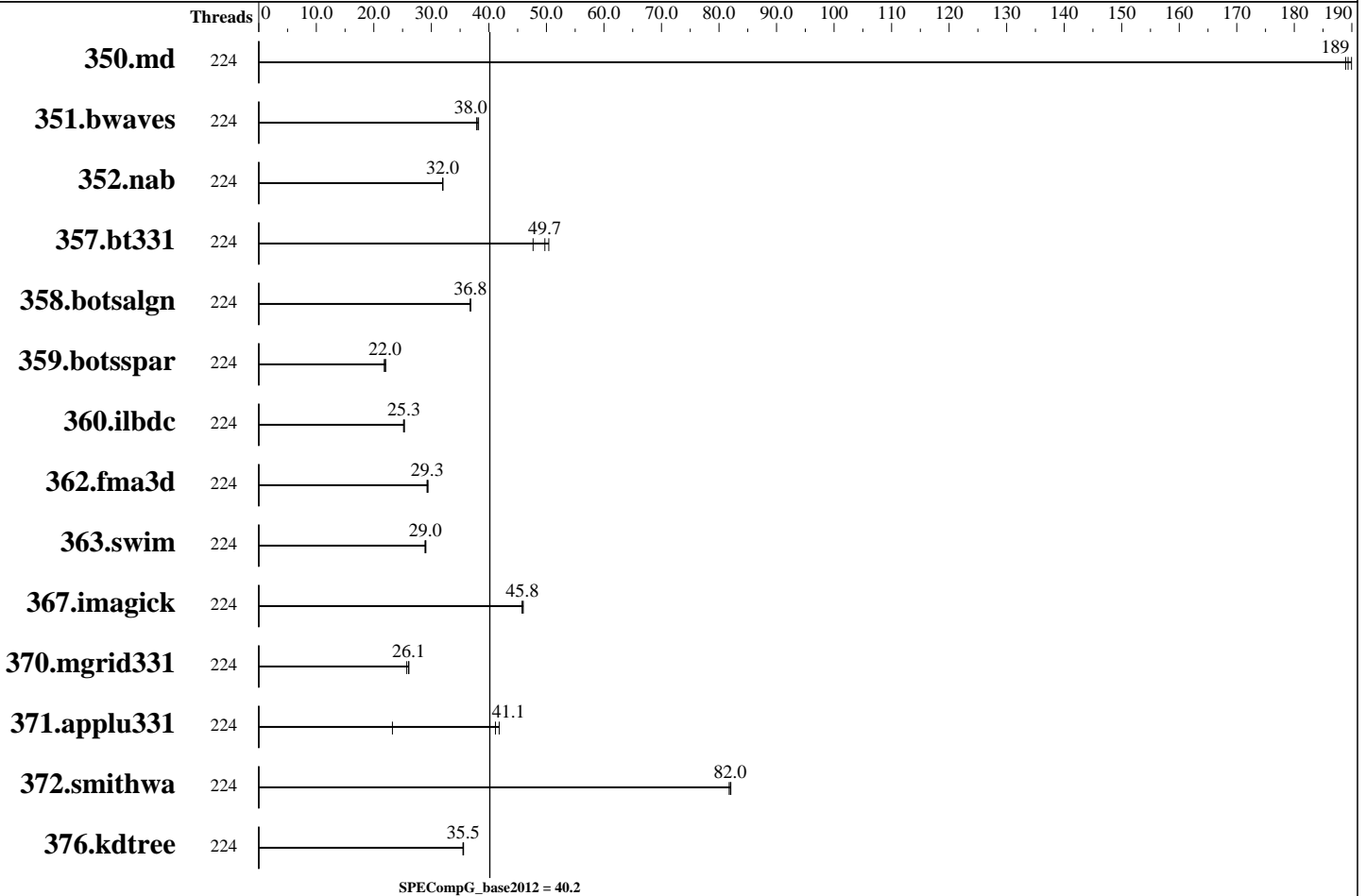
Test sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test date: Sep-2017

Hardware Availability: Aug-2017

Software Availability: Aug-2017



Hardware

CPU Name: Intel Xeon Platinum 8180
 CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz
 CPU MHz: 2500
 CPU MHz Maximum: 3800
 FPU: Integrated
 CPU(s) enabled: 112 cores, 4 chips, 28 cores/chip, 2 threads/core
 CPU(s) orderable: 2,4,8 Chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 1 MB I+D on chip per core
 L3 Cache: 38.5 MB I+D on chip per chip
 Other Cache: None
 Memory: 768 GB (48 x 16 GB 2Rx8 PC4-2666V)
 Disk Subsystem: ThinkSystem M.2 32GB SSD
 Other Hardware: None
 Base Threads Run: 224
 Minimum Peak Threads: --

Continued on next page

Software

Operating System: Red Hat Enterprise Linux Server release 7.3, Kernel 3.10.0-514.el7.x86_64
 Compiler: C/C++/Fortran: Version 18.0.0.128 of Intel Composer XE for Linux Build 20170811
 Auto Parallel: No
 File System: xfs
 System State: Default
 Base Pointers: 64-bit
 Peak Pointers: Not Applicable
 Other Software: None



SPEC OMPG2012 Result

Copyright 2012-2017 Standard Performance Evaluation Corporation

Lenovo Global Technology ThinkSystem SR950

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 40.2

OMP2012 license:28

Test sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test date: Sep-2017

Hardware Availability: Aug-2017

Software Availability: Aug-2017

Maximum Peak Threads: --

Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
350.md	224	24.4	190	24.5	189	<u>24.5</u>	<u>189</u>							
351.bwaves	224	119	38.2	<u>119</u>	<u>38.0</u>	120	37.9							
352.nab	224	<u>122</u>	<u>32.0</u>	122	32.0	122	32.0							
357.bt331	224	99.4	47.7	94.0	50.4	<u>95.3</u>	<u>49.7</u>							
358.botsalgn	224	118	36.8	118	36.8	<u>118</u>	<u>36.8</u>							
359.botsspar	224	<u>239</u>	<u>22.0</u>	238	22.1	241	21.8							
360.ilbdc	224	141	25.2	141	25.3	<u>141</u>	<u>25.3</u>							
362.fma3d	224	129	29.4	130	29.3	<u>130</u>	<u>29.3</u>							
363.swim	224	157	28.9	<u>156</u>	<u>29.0</u>	156	29.0							
367.imagick	224	153	46.0	154	45.8	<u>153</u>	<u>45.8</u>							
370.mgrid331	224	169	26.1	<u>170</u>	<u>26.1</u>	172	25.7							
371.applu331	224	<u>147</u>	<u>41.1</u>	145	41.8	261	23.2							
372.smithwa	224	<u>65.4</u>	<u>82.0</u>	65.3	82.1	65.6	81.8							
376.kdtree	224	126	35.6	<u>127</u>	<u>35.5</u>	127	35.5							

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

Platform Notes

```

Sysinfo program /home/omp2012/Docs/sysinfo
$Rev: 395 $ $Date:: 2012-07-25 $# 8f8c0fe9e19c658963a1e67685e50647
running on tvan.labs.lenovo.com Sat Sep 16 23:06:27 2017

```

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/omp2012/Docs/config.html#sysinfo>

From /proc/cpuinfo

```

model name : Intel(R) Xeon(R) Platinum 8180 CPU @ 2.50GHz
 4 "physical id"s (chips)
 224 "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 : 28
siblings : 56
physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
25 26 27 28 29 30
physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
25 26 27 28 29 30
physical 2: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
25 26 27 28 29 30

```

Continued on next page



SPEC OMPG2012 Result

Copyright 2012-2017 Standard Performance Evaluation Corporation

Lenovo Global Technology ThinkSystem SR950

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 40.2

OMP2012 license:28

Test sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test date: Sep-2017

Hardware Availability: Aug-2017

Software Availability: Aug-2017

Platform Notes (Continued)

```
physical 3: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
25 26 27 28 29 30
cache size : 39424 KB
```

```
From /proc/meminfo
MemTotal:      791977888 kB
HugePages_Total:    0
Hugepagesize:    2048 kB
```

```
From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.3 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.3"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.3 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.3:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.3:ga:server
```

```
uname -a:
Linux tvan.labs.lenovo.com 3.10.0-514.el7.x86_64 #1 SMP Wed Oct 19 11:24:13
EDT 2016 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Sep 15 22:02
```

```
SPEC is set to: /home/omp2012
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/mapper/rhel-root xfs   26G   20G  6.3G  76% /
```

```
Additional information from dmidecode:
BIOS Lenovo  -[PSE105V-1.00]-08/11/2017
Memory:
48x NO DIMM NO DIMM
48x Samsung M393A2K43BB1-CTD 16 GB 2666 MHz 2 rank
```

(End of data from sysinfo program)

General Notes

```
=====
General base OMP Library Settings
ENV_KMP_AFFINITY=compact,1

=====
General OMP Library Settings
KMP_LIBRARY=turnaround
KMP_STACKSIZE=16G
```

Continued on next page



SPEC OMPG2012 Result

Copyright 2012-2017 Standard Performance Evaluation Corporation

Lenovo Global Technology
ThinkSystem SR950

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 40.2

OMP2012 license:28

Test sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test date: Sep-2017

Hardware Availability: Aug-2017

Software Availability: Aug-2017

General Notes (Continued)

KMP_BLOCKTIME=infinite
OMP_DYNAMIC=FALSE
OMP_NESTED=FALSE
OMP_SCHEDULE=static

=====
BIOS setting notes:
Operating Mode set to Maximum Performance Mode
=====

Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Base Portability Flags

350.md: -FR
357.bt331: -mmodel=medium
363.swim: -mmodel=medium
367.imagick: -std=c99

Base Optimization Flags

C benchmarks:

-O2 -qopenmp -ipo -xHOST -ansi-alias

C++ benchmarks:

-O2 -qopenmp -ipo -xHOST -ansi-alias

Fortran benchmarks:

-O2 -qopenmp -ipo -xHOST -align array64byte

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

<http://www.spec.org/omp2012/flags/Lenovo-Platform-Flags-V1.2-SKL-C.html>

<http://www.spec.org/omp2012/flags/lenovo.html>



SPEC OMPG2012 Result

Copyright 2012-2017 Standard Performance Evaluation Corporation

Lenovo Global Technology
ThinkSystem SR950

SPECCompG_peak2012 = Not Run

SPECCompG_base2012 = 40.2

OMP2012 license:28

Test sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test date: Sep-2017

Hardware Availability: Aug-2017

Software Availability: Aug-2017

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

<http://www.spec.org/omp2012/flags/Lenovo-Platform-Flags-V1.2-SKL-C.xml>

<http://www.spec.org/omp2012/flags/lenovo.xml>

SPEC is a registered trademark 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 OMP2012 v1.0.
Report generated on Thu Nov 2 16:49:33 2017 by SPEC OMP2012 PS/PDF formatter v541.
Originally published on 2 November 2017.