# SPEC® OMPG2012 Result



## Cisco Systems

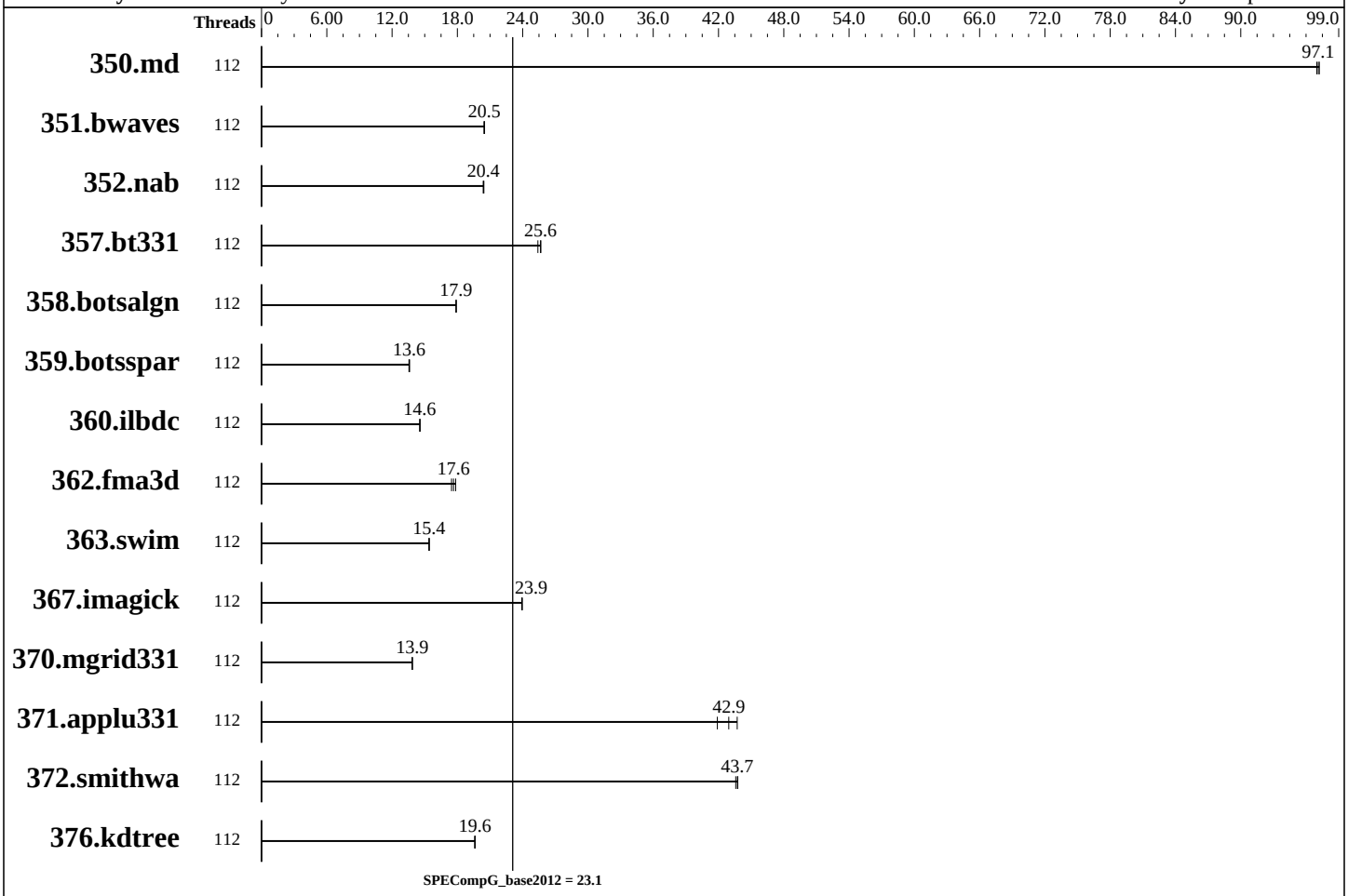
Cisco UCS C240 M5 (Intel Xeon Platinum 8180, 2.50 GHz)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = 23.1

**OMP2012 license:** 9019
**Test sponsor:** Cisco Systems
**Tested by:** Cisco Systems

**Test date:** Jun-2017
**Hardware Availability:** Jul-2017
**Software Availability:** Sep-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: | 56 cores, 2 chips, 28 cores/chip, 2 threads/core |
| CPU(s) orderable: | 1,2 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: | 384 GB (24 x 16 GB 2Rx4 PC4-2666V-R) |
| Disk Subsystem: | 1 X 800 GB SSD SAS |
| Other Hardware: | None |
| Base Threads Run: | 112 |
| Minimum Peak Threads: | -- |

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### Software

| | |
|---|---|
| Operating System: | SUSE Linux Enterprise Server 12 SP2 (x86_64) |
| Compiler: | C/C++/Fortran: Version 18.0.0.082 of Intel Composer Beta for Linux Build 20170510 |
| Auto Parallel: | No |
| File System: | xfs |
| System State: | Run Level 3 (multi-user) |
| Base Pointers: | 64-bit |
| Peak Pointers: | Not Applicable |
| Other Software: | None |

## Results Table

| Benchmark | Base | | | | | | | Peak | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Threads | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Threads | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 350.md | 112 | 47.7 | 97.0 | 47.6 | 97.2 | **47.7** | **97.1** | | | | | | | |
| 351.bwaves | 112 | **221** | **20.5** | 222 | 20.4 | 221 | 20.5 | | | | | | | |
| 352.nab | 112 | 191 | 20.4 | 190 | 20.4 | **191** | **20.4** | | | | | | | |
| 357.bt331 | 112 | 185 | 25.7 | **185** | **25.6** | 187 | 25.4 | | | | | | | |
| 358.botsalgn | 112 | 243 | 17.9 | **243** | **17.9** | 243 | 17.9 | | | | | | | |
| 359.botsspar | 112 | 386 | 13.6 | 387 | 13.6 | **387** | **13.6** | | | | | | | |
| 360.ilbdc | 112 | **245** | **14.6** | 245 | 14.6 | 245 | 14.5 | | | | | | | |
| 362.fma3d | 112 | 213 | 17.8 | **215** | **17.6** | 218 | 17.5 | | | | | | | |
| 363.swim | 112 | **294** | **15.4** | 294 | 15.4 | 294 | 15.4 | | | | | | | |
| 367.imagick | 112 | 294 | 23.9 | 293 | 24.0 | **294** | **23.9** | | | | | | | |
| 370.mgrid331 | 112 | **319** | **13.9** | 319 | 13.8 | 319 | 13.9 | | | | | | | |
| 371.applu331 | 112 | 139 | 43.7 | **141** | **42.9** | 145 | 41.9 | | | | | | | |
| 372.smithwa | 112 | 123 | 43.6 | **123** | **43.7** | 122 | 43.8 | | | | | | | |
| 376.kdtree | 112 | 230 | 19.6 | **229** | **19.6** | 229 | 19.6 | | | | | | | |

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

## Platform Notes

```
Sysinfo program /opt/omp2012/Docs/sysinfo
$Rev: 395 $ $Date:: 2012-07-25 #$ 8f8c0fe9e19c658963a1e67685e50647
running on linux-0s5q Tue Jun 20 12:23:44 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
      2 "physical id"s (chips)
      112 "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
   cache size : 39424 KB
```

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## Platform Notes (Continued)

```
From /proc/meminfo
   MemTotal:       394863296 kB
   HugePages_Total:       0
   Hugepagesize:       2048 kB

From /etc/*release* /etc/*version*
   SuSE-release:
      SUSE Linux Enterprise Server 12 (x86_64)
      VERSION = 12
      PATCHLEVEL = 2
      # This file is deprecated and will be removed in a future service pack or
      release.
      # Please check /etc/os-release for details about this release.
   os-release:
      NAME="SLES"
      VERSION="12-SP2"
      VERSION_ID="12.2"
      PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
      ID="sles"
      ANSI_COLOR="0;32"
      CPE_NAME="cpe:/o:suse:sles:12:sp2"

uname -a:
   Linux linux-0s5q 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016
   (9464f67) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jun 20 12:20

SPEC is set to: /opt/omp2012
   Filesystem     Type  Size  Used Avail Use% Mounted on
   /dev/sdb2      xfs   700G   40G  661G   6% /

Additional information from dmidecode:
  BIOS Cisco Systems, Inc. C240M5.3.1.0.275.0519172339 05/19/2017
  Memory:
   24x   16 GB
   24x 0xCE00 M393A2G40EB2-CTD 16 GB 2666 MHz 2 rank

(End of data from sysinfo program)
```

## General Notes

```
================================================================================
BIOS settings notes:
  Transparent Huge Pages enabled with:
  echo always > /sys/kernel/mm/transparent_hugepage/enabled
BIOS settings notes:
  Intel Turbo Boost Technology (Turbo)  : Enabled
  CPU performance set to Enterprise
  Power Performance Tuning set to OS
  SNC set to Disabled
```

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## General Notes (Continued)

```
    IMC Interleaving set to Auto
  General OMP Library Settings
    ENV_KMP_LIBRARY=turnaround
    ENV_OMP_SCHEDULE=static
    ENV_KMP_BLOCKTIME=200
    ENV_KMP_STACKSIZE=702M
    ENV_OMP_DYNAMIC=FALSE
    ENV_OMP_NESTED=FALSE

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

## Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

## Base Portability Flags

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

## Base Optimization Flags

C benchmarks:
-O3 -qopenmp -ipo -xHOST -ansi-alias

C++ benchmarks:
-O3 -qopenmp -ipo -xHOST -ansi-alias

Fortran benchmarks:
-O3 -qopenmp -ipo -xHOST -align array64byte

The flags file that was used to format this result can be browsed at
http://www.spec.org/omp2012/flags/Intel-ic13.0-linux64.20170711.00.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/omp2012/flags/Intel-ic13.0-linux64.20170711.00.xml



For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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