SPEC® OMPG2012 Result

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Hewlett Packard Enterprise
(Test Sponsor: HPE)

HPE Superdome Flex 280
(Intel Xeon Platinum 8380HL, 2.9 GHz)

SPECompG_peak2012 = Not Run

SPECompG_base2012 = NC

OMP2012 license: 1		**Test date:**	Feb-2021
Test sponsor: HPE		**Hardware Availability:**	Jan-2021
Tested by: HPE		**Software Availability:**	Dec-2020

SPEC has determined that this result was not in compliance with the SPEC OMP2012 run and reporting rules. Specifically, the submitter reported that the result used an unsupported version of the operating system.

...d OS can be found at https://www.spec.org/omp2012/results/res2021q2/omp2012...

Non-Compliant

Threads

350.md

351.bwaves

352.nab

357.bt331

358.botsalgn

359.botsspar

360.ilbdc

362.fma3d

363.swim

367.imagick

370.mgrid331

371.applu331

372.smithwa

376.kdtree

Hardware

CPU Name:	Intel Xeon Platinum 8380HL
CPU Characteristics:	Intel Turbo Boost Technology up to 4.30 GHz
CPU MHz:	2900
CPU MHz Maximum:	4300
FPU:	Integrated
CPU(s) enabled:	224 cores, 8 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

Continued on next page

Software

Operating System:	SUSE Linux Enterprise Server 12 SP5 Kernel 4.12.14-122.29-default
Compiler:	C/C++/Fortran: Version 19.1.3.304 of Intel Compiler Build 20200925 for Linux
Auto Parallel:	No
File System:	tmpfs
System State:	Multi-user, run level 3
Base Pointers:	64-bit

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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:	6 TB (48 x 128 GB 4Rx4 PC4-3200AA-L)
Disk Subsystem:	3 TB tmpfs
Other Hardware:	None
Base Threads Run:	224
Minimum Peak Threads:	--
Maximum Peak Threads:	--

Peak Pointers:	Not Applicable
Other Software:	HPE Foundation Software 2.4
	Build...
	...1250.200729T0100.a.sles12sp5hpe-200729T0100)

Results Table

Benchmark	Base						Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
350.md	224	NC	NC	NC	NC	NC	NC						
351.bwaves	224	NC	NC	NC	NC	NC	NC						
352.nab	224	NC	NC	NC	NC	NC	NC						
357.bt331	224	NC	NC	NC	NC	NC	NC						
358.botsalgn	224	NC	NC	NC	NC	NC	NC						
359.botsspar	224	NC	NC	NC	NC	NC	NC						
360.ilbdc	224	NC	NC	NC	NC	NC	NC						
362.fma3d	224	NC	NC	NC	NC	NC	NC						
363.swim	224	NC	NC	NC	NC	NC	NC						
367.imagick	224	NC	NC	NC	NC	NC	NC						
370.mgrid331	224	NC	NC	NC	NC	NC	NC						
371.applu331	224	NC	NC	NC	NC	NC	NC						
372.smithwa	224	NC	NC	NC	NC	NC	NC						
376.kdtree	224	NC	NC	NC	NC	NC	NC						

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

Compiler Invocation Notes

```
COPTIMIZE=-O3 -xCORE-AVX512 -ipo1  -qopenmp -qopt-zmm-usage=high -ansi-alias -mcmodel=medium -shared-intel
CXXOPTIMIZE=-O3 -xCORE-AVX512 -ipo1  -qopenmp -qopt-zmm-usage=high -ansi-alias -mcmodel=medium -shared-intel
FOPTIMIZE=-O3 -xCORE-AVX512 -ipo1  -qopenmp -qopt-zmm-usage=high -mcmodel=medium -shared-intel
```

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Submit Notes

```
    The config file option 'submit' was used.
    For all benchmarks threads were bound to cores using
    the following submit command:
        dplace -e -c 0-223 $command
    This binds threads in order of creation, beginning
    with the master thread on logical cpu 0, the first slave
    thread on logical cpu 1, and so on.
```

Operating System Notes

```
    Software Environment:
        export KMP_AFFINITY=disabled
        export KMP_STACKSIZE=200M
        export KMP_SCHEDULE=static,balanced
        export OMP_DYNAMIC=FALSE
        ulimit -s unlimited

     The tmpfs filesystem was set up with:
       mount -t tmpfs -o    nosuid,nodev,mpol=interleave:0-7 /dev/shm
```

General Notes

```
    System settings notes:

    Workload Profile set to HPC
    Workload Profile set to Custom
    Power Regulator set to OS Control

    Intel Turbo Boost Technology (Turbo): Enabled
    Enhanced Processor Performance:  Enabled

    For all benchmarks core frequencies were set using the following command:
        cpupower frequency-set -d 2901MHz -u 2901MHz -g performance

    NA: The test sponsor attests, as of date of publication, the CVE-2017-5754 (Meltdown)
    is mitigated in the system as tested and documented.
    Yes: The test sponsor attests, as of date of publication, the CVE-2017-5753 (Spectre variant 1)
    is mitigated in the system as tested and documented.
    Yes: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Spectre variant 2)
    is mitigated in the system as tested and documented.
```

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[...] OS can be found at https://www.spec.org/omp2012/results/res2021q2/omp2012[...]

Base Compiler Invocation

C benchmarks:
```
icc
```

C++ benchmarks:
```
icpc
```

Fortran benchmarks:
```
ifort
```

Base Portability Flags

```
    350.md: -free
367.imagick: -std=c99
```

Base Optimization Flags

C benchmarks:
```
-O3 -xCORE-AVX512 -ipo1 -qopenmp -qopt-zmm-usage=high -ansi-alias
-mcmodel=medium -shared-intel
```

C++ benchmarks:
```
-O3 -xCORE-AVX512 -ipo1 -qopenmp -qopt-zmm-usage=high -ansi-alias
-mcmodel=medium -shared-intel
```

Fortran benchmarks:
```
-O3 -xCORE-AVX512 -ipo1 -qopenmp -qopt-zmm-usage=high
-mcmodel=medium -shared-intel
```

The flags files that were used to format this result can be browsed at
http://www.spec.org/omp2012/flags/HPE-Platform-Flags-Intel-V1.3-CLX-revD.html
http://www.spec.org/omp2012/flags/HPE-OMP2012-ic18.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/omp2012/flags/HPE-Platform-Flags-Intel-V1.3-CLX-revD.xml
http://www.spec.org/omp2012/flags/HPE-OMP2012-ic18.xml

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

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