



SPEChpc™ 2021 Tiny Result

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xFusion

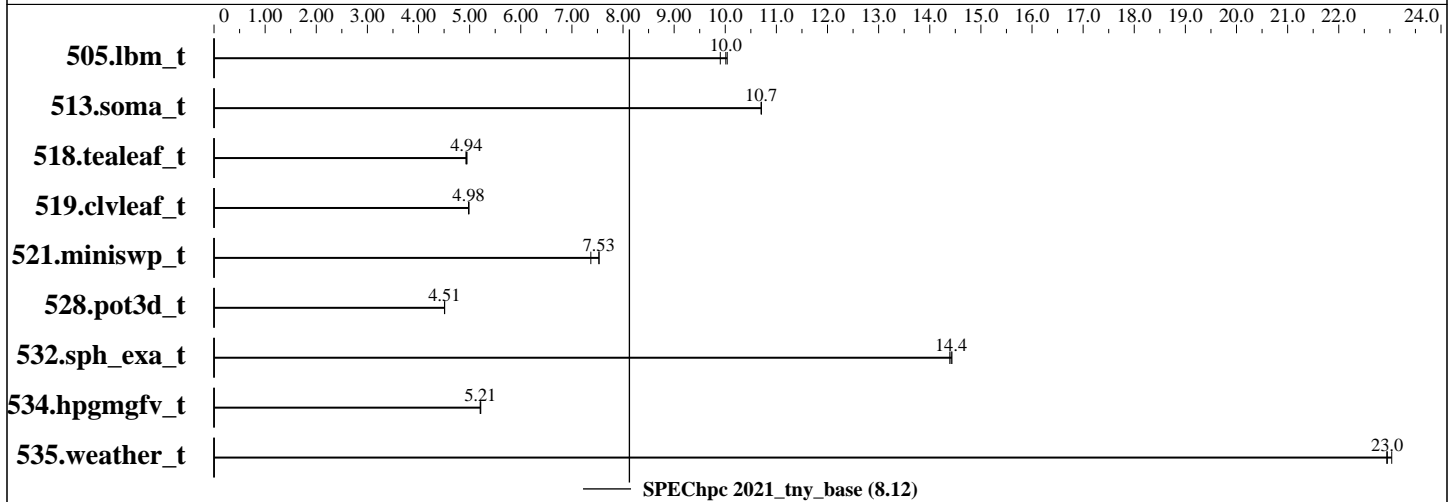
SPEChpc 2021_tny_base = 8.12

xFusion 2288H V7 (Intel Xeon Platinum 8490H)

SPEChpc 2021_tny_peak = Not Run

hpc2021 License: 6488
Test Sponsor: xFusion
Tested by: xFusion

Test Date: Jan-2023
Hardware Availability: Jan-2023
Software Availability: Nov-2022



Results Table

Benchmark	Base										Peak								
	Model	Ranks	Thrds/Rnk	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Model	Ranks	Thrds/Rnk	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	
505.lbm_t	MPI	120	1	227	9.90	<u>225</u>	<u>10.0</u>	224	10.0										
513.soma_t	MPI	120	1	346	10.7	346	10.7	<u>346</u>	<u>10.7</u>										
518.tealeaf_t	MPI	120	1	<u>334</u>	<u>4.94</u>	333	4.95	335	4.93										
519.clvleaf_t	MPI	120	1	<u>331</u>	<u>4.98</u>	331	4.98	331	4.98										
521.miniswp_t	MPI	120	1	<u>213</u>	<u>7.53</u>	212	7.53	217	7.37										
528.pot3d_t	MPI	120	1	471	4.51	<u>471</u>	<u>4.51</u>	471	4.51										
532.sph_exa_t	MPI	120	1	135	14.4	135	14.4	<u>135</u>	<u>14.4</u>										
534.hpgmgfv_t	MPI	120	1	226	5.21	225	5.22	<u>225</u>	<u>5.21</u>										
535.weather_t	MPI	120	1	140	23.0	141	22.9	<u>141</u>	<u>23.0</u>										

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



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Hardware Summary

Type of System: Homogenous Cluster
Compute Node: xFusion 2288H V7
Interconnect: N/A
Compute Nodes Used: 1
Total Chips: 2
Total Cores: 120
Total Threads: 120
Total Memory: 1 TB
Max. Peak Threads: --

Software Summary

Compiler: Intel oneAPI Compiler 2022.2.1
MPI Library: Intel MPI Library for Linux* OS, Version 2022.2.1 Build 20221020
Other MPI Info: N/A
Other Software: N/A
Base Parallel Model: MPI
Base Ranks Run: 120
Base Threads Run: 1
Peak Parallel Models: Not Run
Minimum Peak Ranks: --
Maximum Peak Ranks: --
Max. Peak Threads: --
Min. Peak Threads: --

Node Description: xFusion 2288H V7

Hardware

Number of nodes: 1
Uses of the node: Compute
Vendor: xFusion
Model: xFusion 2288H V7
CPU Name: Intel Xeon Platinum 8490H
CPU(s) orderable: 2 chips
Chips enabled: 2
Cores enabled: 120
Cores per chip: 60
Threads per core: 1
CPU Characteristics: Turbo Boost Technology up to 3.5 GHz
CPU MHz: 1900
Primary Cache: 32 KB I + 48 KB D on chip per core
Secondary Cache: 2 MB I+D on chip per core
L3 Cache: 112.5 MB I+D on chip per chip
Other Cache: None
Memory: 1 TB (16 x 64 GB 2Rx4 PC5-4800B-R)
Disk Subsystem: 1 x 7.68 TB NVMe SSD
Other Hardware: None
Accel Count: --
Accel Model: --
Accel Vendor: --
Accel Type: --
Accel Connection: --
Accel ECC enabled: --
Accel Description: --
Adapter: N/A
Number of Adapters: 0
Slot Type: N/A
Data Rate: N/A
Ports Used: 0

Software

Accelerator Driver: N/A
Adapter: N/A
Adapter Driver: N/A
Adapter Firmware: N/A
Operating System: CentOS Linux release 8.2.2004
4.18.0-193.el8.x86_644
Local File System: xfs
Shared File System: N/A
System State: Multi-user, run level 3
Other Software: N/A

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Node Description: xFusion 2288H V7

Hardware (Continued)

Interconnect Type: N/A

Interconnect Description: N/A

Hardware

Vendor: N/A
Model: N/A
Switch Model: N/A
Number of Switches: 0
Number of Ports: 0
Data Rate: N/A
Firmware: N/A
Topology: N/A
Primary Use: N/A

Software

: --

Submit Notes

The config file option 'submit' was used.
export LD_PRELOAD="/usr/lib64/libhugetlbfs.so \$LD_PRELOAD"
export OMP_PROC_BIND=true
mpirexec.hydra -bootstrap ssh --bind-to core -np \$ranks -genv OMP_NUM_THREADS=\$threads \$command

General Notes

Submitted_by: luxu <luxu@xfusion.com>
Submitted: Thu Jan 26 12:25:09 EST 2023
Submission: hpc2021-20230110-00157.sub

Compiler Version Notes

=====
CC 505.lbm_t(base) 513.soma_t(base) 518.tealeaf_t(base) 521.miniswp_t(base)
534.hpgmgfv_t(base)

Intel(R) oneAPI DPC++/C++ Compiler 2022.1.0 (2022.1.0.20220316)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /mnt/share/opt/intel/2022.2.0/compiler/latest/linux/bin-llvm

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Compiler Version Notes (Continued)

CXXC 532.sph_exa_t(base)

Intel(R) oneAPI DPC++/C++ Compiler 2022.1.0 (2022.1.0.20220316)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /mnt/share/opt/intel/2022.2.0/compiler/latest/linux/bin-llvm

=====
FC 519.clvleaf_t(base) 528.pot3d_t(base) 535.weather_t(base)

ifx (IFORT) 2022.1.0 20220316
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Base Compiler Invocation

C benchmarks:
mpiicc -cc=icx

C++ benchmarks:
mpiicpc -cxx=icx

Fortran benchmarks:
mpiifort -fc=ifx

Base Portability Flags

505.lbm_t: -lstdc++
513.soma_t: -lstdc++ -DSPEC_NO_VAR_ARRAY_REDUCE
518.tealeaf_t: -lstdc++
519.clvleaf_t: -lstdc++
521.miniswp_t: -lstdc++
528.pot3d_t: -lstdc++
532.sph_exa_t: -lstdc++
534.hpgmgfv_t: -lstdc++
535.weather_t: -lstdc++



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Base Optimization Flags

C benchmarks:

-Ofast -ipo -xCORE-AVX512 -mprefer-vector-width=512 -fiopenmp
-ansi-alias

C++ benchmarks:

-Ofast -ipo -xCORE-AVX512 -mprefer-vector-width=512 -fiopenmp
-ansi-alias

Fortran benchmarks:

-Ofast -ipo -xCORE-AVX512 -mprefer-vector-width=512 -fiopenmp
-nostandard-realloc-lhs -align array64byte

Base Other Flags

C benchmarks (except as noted below):

-Ispecmpitime

521.miniswp_t: -Ispecmpitime/

534.hpgmgfv_t: -Ispecmpitime

C++ benchmarks:

-Ispecmpitime

Fortran benchmarks:

519.clvleaf_t: -Ispecmpitime

The flags file that was used to format this result can be browsed at

<http://www.spec.org/hpc2021/flags/Intel-oneAPI-icx2021-official-linux64.2023-01-27.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/hpc2021/flags/Intel-oneAPI-icx2021-official-linux64.2023-01-27.xml>

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

Tested with SPEChpc2021 v1.1.7 on 2023-01-10 07:57:28-0500.

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