



SPEChpc™ 2021 Tiny Result

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xFusion

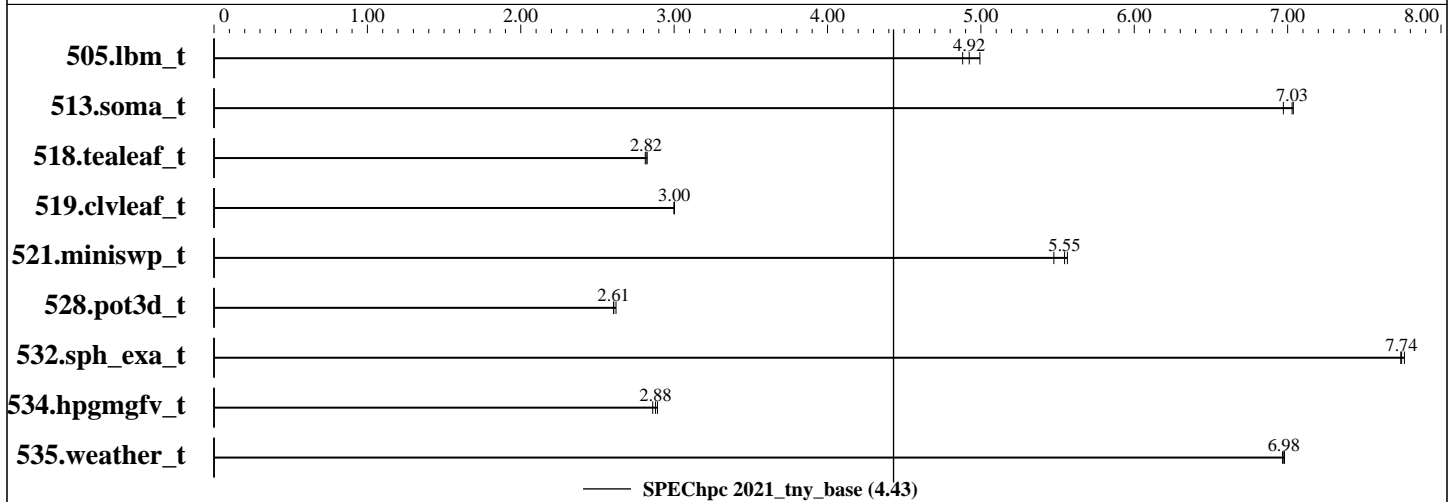
SPEChpc 2021_tny_base = 4.43

FusionServer 2288H V6 (Intel Xeon Platinum 8380)

SPEChpc 2021_tny_peak = Not Run

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

Test Date: Jul-2022
Hardware Availability: Apr-2021
Software Availability: Oct-2021



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	80	1	457	4.92	451	4.99	461	4.88									
513.soma_t	MPI	80	1	526	7.04	531	6.97	526	7.03									
518.tealeaf_t	MPI	80	1	587	2.81	584	2.82	586	2.82									
519.clvleaf_t	MPI	80	1	550	3.00	550	3.00	550	3.00									
521.miniswp_t	MPI	80	1	289	5.55	288	5.56	292	5.48									
528.pot3d_t	MPI	80	1	811	2.62	816	2.61	815	2.61									
532.sph_exa_t	MPI	80	1	252	7.74	251	7.76	252	7.74									
534.hpgmgfv_t	MPI	80	1	411	2.86	406	2.89	408	2.88									
535.weather_t	MPI	80	1	462	6.98	462	6.98	463	6.97									

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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: SMP
Compute Node: FusionServer 2288H V6
Interconnect: None
Compute Nodes Used: 1
Total Chips: 2
Total Cores: 80
Total Threads: 80
Total Memory: 256 GB
Max. Peak Threads: --

Software Summary

Compiler: Intel oneAPI Compiler 2021.4.0
MPI Library: Intel MPI Library for Linux* OS, Version 2021.4.0 Build 20210831
Other MPI Info: --
Other Software: --
Base Parallel Model: MPI
Base Ranks Run: 80
Base Threads Run: 1
Peak Parallel Models: Not Run
Minimum Peak Ranks: --
Maximum Peak Ranks: --
Max. Peak Threads: --
Min. Peak Threads: --

Node Description: FusionServer 2288H V6

Hardware

Number of nodes: 1
Uses of the node: Compute
Vendor: xFusion
Model: FusionServer 2288H V6
CPU Name: Intel Xeon Platinum 8380
CPU(s) orderable: 1, 2 chips
Chips enabled: 2
Cores enabled: 80
Cores per chip: 40
Threads per core: 1
CPU Characteristics: Turbo Boost Technology up to 3.4 GHz
CPU MHz: 2300
Primary Cache: 32 KB I + 48 KB D on chip per core
Secondary Cache: 1.25 MB I+D on chip per core
L3 Cache: 60 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (16 x 16 GB 2Rx8 PC4-3200R)
Disk Subsystem: 2 x 480 GB SATA 2.5" SSD (RAID 1)
Other Hardware: None
Accel Count: None
Accel Model: --
Accel Vendor: None
Accel Type: None
Accel Connection: None
Accel ECC enabled: None
Accel Description: None
Adapter: MCX653105A-EFAT
Number of Adapters: 1
Slot Type: PCI-Express 4.0 x16
Data Rate: 100 Gb/s
Ports Used: 1

Software

Accelerator Driver: --
Adapter: MCX653105A-EFAT
Adapter Driver: 5.4-3.1.0
Adapter Firmware: 20.32.1010
Operating System: CentOS Linux release 8.2.2004
4.18.0-193.el8.x86_644
Local File System: xfs
Shared File System: NFS
System State: Multi-user, run level 3
Other Software: None

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Node Description: FusionServer 2288H V6

Hardware (Continued)

Interconnect Type: Mellanox HDR

Interconnect Description: None

Hardware

Vendor: None
Model: None
Switch Model: None
Number of Switches: 0
Number of Ports: 0
Data Rate: None
Firmware: None
Topology: None
Primary Use: None

Software

: --

Submit Notes

The config file option 'submit' was used.
export LD_PRELOAD="/usr/lib64/libhugetlbfs.so \$LD_PRELOAD"
MPI startup command:
mpirexec.hydra -bootstrap ssh -hostfile \$[top]/lnode --bind-to core -np \$ranks -ppn \$ppn \$command

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 2021.4.0 (2021.4.0.20210924)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /home/opt/compiler/oneapi/2021.4.0/compiler/2021.4.0/linux/bin
=====

=====
CXXC 532.sph_exa_t(base)
=====

Intel(R) oneAPI DPC++/C++ Compiler 2021.4.0 (2021.4.0.20210924)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /home/opt/compiler/oneapi/2021.4.0/compiler/2021.4.0/linux/bin
=====

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Compiler Version Notes (Continued)

```

=====
FC 519.clvleaf_t(base) 528.pot3d_t(base) 535.weather_t(base)
=====
ifx (IFORT) 2021.4.0 Beta 20210924
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=====

```

Base Compiler Invocation

C benchmarks:
`mpiicc -cc=icx -lstdc++(*)`

C++ benchmarks:
`mpiicpc -cxx=icx -lstdc++(*)`

Fortran benchmarks:
`mpiifort -fc=ifx -lstdc++(*)`

(*) Indicates a compiler flag that was found in a non-compiler variable.

Base Portability Flags

513.soma_t: -DSPEC_NO_VAR_ARRAY_REDUCE

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`



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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.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.xml>

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

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