



SPEChpc™ 2021 Small Result

Copyright 2021-2022 Standard Performance Evaluation Corporation

xFusion

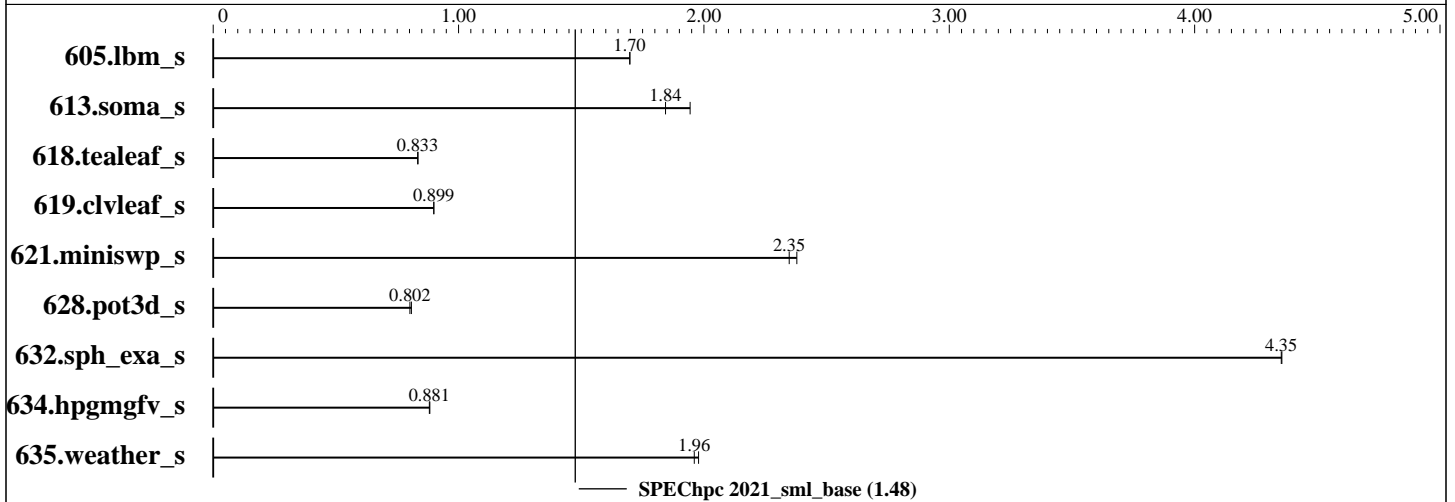
SPEChpc 2021_sml_base = 1.48

FusionServer 2288H V6 (Intel Xeon Platinum 8380)

SPEChpc 2021_sml_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
605.lbm_s	MPI	240	1	913	1.70	913	1.70											
613.soma_s	MPI	240	1	868	1.84	823	1.94											
618.tealeaf_s	MPI	240	1	2456	0.835	2460	0.833											
619.civleaf_s	MPI	240	1	1834	0.900	1836	0.899											
621.miniswp_s	MPI	240	1	469	2.35	462	2.38											
628.pot3d_s	MPI	240	1	2089	0.802	2073	0.808											
632.sph_exa_s	MPI	240	1	528	4.36	528	4.35											
634.hpgmgfv_s	MPI	240	1	1107	0.881	1104	0.883											
635.weather_s	MPI	240	1	1314	1.98	1326	1.96											

SPEChpc 2021_sml_base = **1.48**

SPEChpc 2021_sml_peak = **Not Run**

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



SPEChpc™ 2021 Small Result

Copyright 2021-2022 Standard Performance Evaluation Corporation

xFusion

SPEChpc 2021_sml_base = 1.48

FusionServer 2288H V6 (Intel Xeon Platinum 8380)

SPEChpc 2021_sml_peak = Not Run

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

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

Hardware Summary

Type of System: Homogeneous Cluster
Compute Node: Fusionserver 2288H V6
Interconnect: Mellanox HDR
Compute Nodes Used: 3
Total Chips: 6
Total Cores: 240
Total Threads: 240
Total Memory: 768 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: 240
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: 3
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

(Continued on next page)



SPEChpc™ 2021 Small Result

Copyright 2021-2022 Standard Performance Evaluation Corporation

xFusion

SPEChpc 2021_sml_base = 1.48

FusionServer 2288H V6 (Intel Xeon Platinum 8380)

SPEChpc 2021_sml_peak = Not Run

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

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

Node Description: Fusionserver 2288H V6

Hardware (Continued)

Interconnect Type: Mellanox HDR

Interconnect Description: Mellanox HDR

Hardware

Vendor: Mellanox
Model: Mellanox HDR
Switch Model: Mellanox MQM8790-HS2F
InfiniBand Switch
Number of Switches: 1
Number of Ports: 40
Data Rate: 200 Gbit/s
Firmware: --
Topology: Mesh
Primary Use: MPI Traffic

Software

: --

Submit Notes

The config file option 'submit' was used.
export LD_PRELOAD="/usr/lib64/libhugetlbfs.so \$LD_PRELOAD"
MPI startup command:
mpiexec.hydra -bootstrap ssh -hostfile \$[top]/3node --bind-to core -np \$ranks -ppn \$ppn \$command

Compiler Version Notes

=====
CC 605.lbm_s(base) 613.soma_s(base) 618.tealeaf_s(base) 621.miniswp_s(base)
634.hpgmgfv_s(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 632.sph_exa_s(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

(Continued on next page)



SPEChpc™ 2021 Small Result

Copyright 2021-2022 Standard Performance Evaluation Corporation

xFusion

SPEChpc 2021_sml_base = 1.48

FusionServer 2288H V6 (Intel Xeon Platinum 8380)

SPEChpc 2021_sml_peak = Not Run

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

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

Compiler Version Notes (Continued)

```

=====
FC 619.clvleaf_s(base) 628.pot3d_s(base) 635.weather_s(base)
=====
ifx (IFORT) 2021.4.0 Beta 20210924
Copyright (C) 1985-2021 Intel Corporation. All rights reserved.
=====

```

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

`613.soma_s: -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`



SPEChpc™ 2021 Small Result

Copyright 2021-2022 Standard Performance Evaluation Corporation

xFusion

SPEChpc 2021_sml_base = 1.48

FusionServer 2288H V6 (Intel Xeon Platinum 8380)

SPEChpc 2021_sml_peak = Not Run

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

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

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>

SPEChpc is a 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 info@spec.org.

Tested with SPEChpc2021 v1.0.3 on 2022-07-19 06:28:57-0400.
Report generated on 2022-08-24 18:40:54 by hpc2021 PDF formatter v1.0.3.
Originally published on 2022-08-24.