



SPEChpc™ 2021 Tiny Result

Copyright 2021-2023 Standard Performance Evaluation Corporation

Lenovo Global Technology

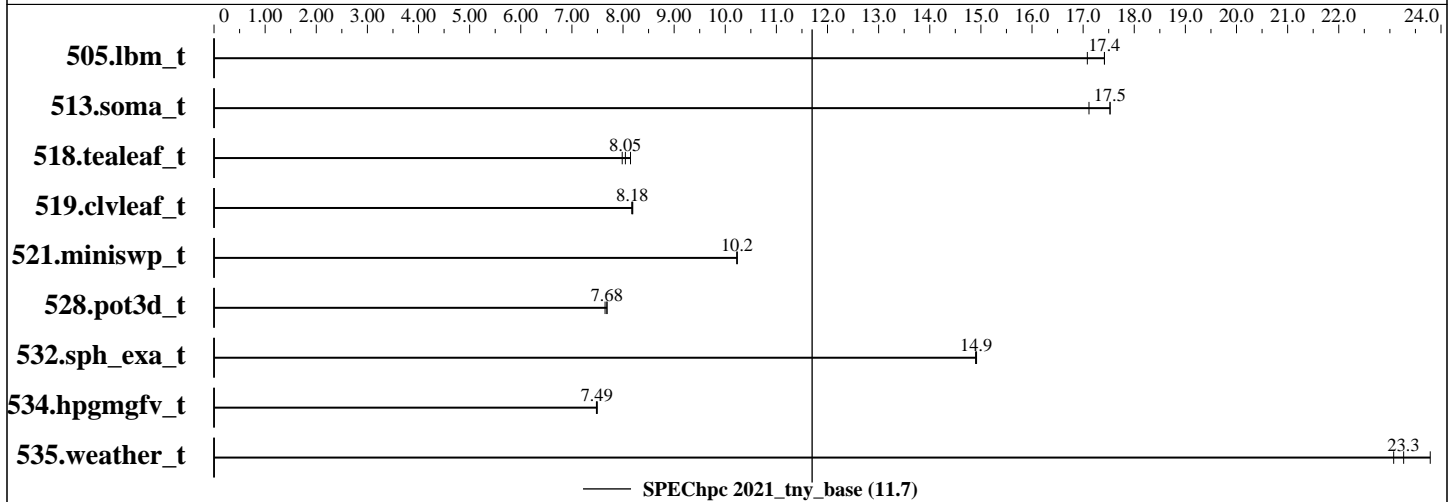
SPEChpc 2021_tny_base = 11.7

ThinkSystem SR950 (Intel Xeon Platinum 8280L)

SPEChpc 2021_tny_peak = Not Run

hpc2021 License: 28
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

Test Date: Aug-2021
Hardware Availability: Apr-2019
Software Availability: Sep-2020



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	OMP	32	7	129	17.4	132	17.1	129	17.4									
513.soma_t	OMP	32	7	211	17.5	216	17.1	211	17.5									
518.tealeaf_t	OMP	32	7	205	8.05	207	7.98	203	8.15									
519.clvleaf_t	OMP	32	7	201	8.19	202	8.18	202	8.17									
521.miniswp_t	OMP	32	7	156	10.2	156	10.2	156	10.2									
528.pot3d_t	OMP	32	7	277	7.68	276	7.69	278	7.65									
532.sph_exa_t	OMP	32	7	131	14.9	131	14.9	131	14.9									
534.hpgmgfv_t	OMP	32	7	157	7.50	157	7.49	157	7.48									
535.weather_t	OMP	32	7	140	23.1	139	23.3	136	23.8									

SPEChpc 2021_tny_base = 11.7

SPEChpc 2021_tny_peak = Not Run

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



SPEChpc™ 2021 Tiny Result

Copyright 2021-2023 Standard Performance Evaluation Corporation

Lenovo Global Technology

SPEChpc 2021_tny_base = 11.7

ThinkSystem SR950 (Intel Xeon Platinum 8280L)

SPEChpc 2021_tny_peak = Not Run

hpc2021 License: 28
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

Test Date: Aug-2021
Hardware Availability: Apr-2019
Software Availability: Sep-2020

Hardware Summary

Type of System: Homogenous
Compute Node: ThinkSystem SR950
Interconnect: N/A
File Server Node: ThinkSystem SR950
Compute Nodes Used: 1
Total Chips: 8
Total Cores: 224
Total Threads: 224
Total Memory: 1536 GB
Max. Peak Threads: --

Software Summary

Compiler: Intel Parallel Studio 2020 Update 4
Version 19.1.3.304 Build 20200925
MPI Library: Intel MPI Library for Linux* OS
Version 2020 Update 9 Build 20200923
Other MPI Info: --
Other Software: --
Base Parallel Model: OMP
Base Ranks Run: 32
Base Threads Run: 7
Peak Parallel Models: Not Run
Minimum Peak Ranks: --
Maximum Peak Ranks: --
Max. Peak Threads: --
Min. Peak Threads: --

Node Description: ThinkSystem SR950

Hardware

Number of nodes: 1
Uses of the node: compute
Vendor: Lenovo Global Technology
Model: ThinkSystem SR950
CPU Name: Intel Xeon Platinum 8280L
CPU(s) orderable: 2,3,4,6,8 chips
Chips enabled: 8
Cores enabled: 224
Cores per chip: 28
Threads per core: 1
CPU Characteristics: Intel Turbo Boost Technology up to 4.0 GHz
CPU MHz: 2700
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 1 MB I+D on chip per core
L3 Cache: 39424 KB I+D on chip per chip
Other Cache: None
Memory: 1536 GB (96 x 16 GB 2Rx8 PC4-2933Y-R)
Disk Subsystem: 1 x 960 GB NVME 2.5" SSD
Other Hardware: None
Accel Count: 0
Accel Model: None
Accel Vendor: None
Accel Type: None
Accel Connection: None
Accel ECC enabled: None
Accel Description: None
Adapter: None
Number of Adapters: 0
Slot Type: None
Data Rate: None

Software

Accelerator Driver: --
Adapter: None
Adapter Driver: None
Adapter Firmware: None
Operating System: Red Hat Enterprise Linux Server release 7.6,
Kernel 3.10.0-957.el7.x86_64
Local File System: xfs
Shared File System: None
System State: Multi-user, run level 3
Other Software: None

(Continued on next page)



SPEChpc™ 2021 Tiny Result

Copyright 2021-2023 Standard Performance Evaluation Corporation

Lenovo Global Technology

SPEChpc 2021_tny_base = 11.7

ThinkSystem SR950 (Intel Xeon Platinum 8280L)

SPEChpc 2021_tny_peak = Not Run

hpc2021 License: 28
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

Test Date: Aug-2021
Hardware Availability: Apr-2019
Software Availability: Sep-2020

Node Description: ThinkSystem SR950

Hardware (Continued)

Ports Used: 0
Interconnect Type: None

Node Description: ThinkSystem SR950

Hardware

Number of nodes: 1
Uses of the node: Fileserver
Vendor: Lenovo Global Technology
Model: ThinkSystem SR950
CPU Name: Intel Xeon Platinum 8280L
CPU(s) orderable: 2,3,4,6,8 chips
Chips enabled: 8
Cores enabled: 224
Cores per chip: 28
Threads per core: 1
CPU Characteristics: Intel Turbo Boost Technology up to 4.0 GHz
CPU MHz: 2700
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 1 MB I+D on chip per core
L3 Cache: 39424 KB I+D on chip per chip
Other Cache: None
Memory: 1536 GB (96 x 16 GB 2Rx8 PC4-2933Y-R)
Disk Subsystem: 1 x 960 GB NVME 2.5" 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
Interconnect Type: N/A

Software

Accelerator Driver: N/A
Adapter: N/A
Adapter Driver: N/A
Adapter Firmware: N/A
Operating System: Red Hat Enterprise Linux Server release 7.6
Local File System: xfs
Shared File System: N/A
System State: Multi-User, run level 3
Other Software: None



SPEChpc™ 2021 Tiny Result

Copyright 2021-2023 Standard Performance Evaluation Corporation

Lenovo Global Technology

SPEChpc2021_tny_base = 11.7

ThinkSystem SR950 (Intel Xeon Platinum 8280L)

SPEChpc2021_tny_peak = Not Run

hpc2021 License: 28
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

Test Date: Aug-2021
Hardware Availability: Apr-2019
Software Availability: Sep-2020

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.
submit = mpirun -host localhost -genv coll_hcoll_enable 1 -genv HCOLL_MAIN_IB=mlx5_0:1
-genv UCX_TLS=sm -genv pml ucx --map-by numa -np \$ranks \$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) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.1.3.304 Build 20200925_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
icc: NOTE: The evaluation period for this product ends on 11-may-2021 UTC.

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

Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.1.3.304 Build 20200925_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
icpc: NOTE: The evaluation period for this product ends on 11-may-2021 UTC.

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

Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.1.3.304 Build 20200925_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
ifort: NOTE: The evaluation period for this product ends on 11-may-2021 UTC.

(Continued on next page)



SPEChpc™ 2021 Tiny Result

Copyright 2021-2023 Standard Performance Evaluation Corporation

Lenovo Global Technology

SPEChpc 2021_tny_base = 11.7

ThinkSystem SR950 (Intel Xeon Platinum 8280L)

SPEChpc 2021_tny_peak = Not Run

hpc2021 License: 28
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

Test Date: Aug-2021
Hardware Availability: Apr-2019
Software Availability: Sep-2020

Compiler Version Notes (Continued)

Base Compiler Invocation

C benchmarks:
mpicc

C++ benchmarks:
mpicpc

Fortran benchmarks:
mpiifort

Base Portability Flags

```
513.soma_t: -DSPEC_NO_VAR_ARRAY_REDUCE  
521.miniswp_t: -DUSE_KBA -DUSE_ACCELDIR  
532.sph_exa_t: -DSPEC_USE_LT_IN_KERNELS
```

Base Optimization Flags

C benchmarks:
-Ofast -no-prec-div -xCORE-AVX512 -ipo -qopenmp -ansi-alias

C++ benchmarks:
-Ofast -no-prec-div -xCORE-AVX512 -ipo -qopenmp -ansi-alias

Fortran benchmarks:
-Ofast -no-prec-div -xCORE-AVX512 -ipo -qopenmp

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

http://www.spec.org/hpc2021/flags/Intel_compiler_flags.html

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

http://www.spec.org/hpc2021/flags/Intel_compiler_flags.xml



SPEChpc™ 2021 Tiny Result

Copyright 2021-2023 Standard Performance Evaluation Corporation

Lenovo Global Technology

SPEChpc 2021_tny_base = 11.7

ThinkSystem SR950 (Intel Xeon Platinum 8280L)

SPEChpc 2021_tny_peak = Not Run

hpc2021 License: 28
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

Test Date: Aug-2021
Hardware Availability: Apr-2019
Software Availability: Sep-2020

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 v1.0.1 on 2020-08-25 23:44:54-0400.
Report generated on 2023-08-25 18:57:03 by hpc2021 PDF formatter v1.0.3.
Originally published on 2021-10-20.