

SPEChpc™ 2021 Tiny Result

Copyright 2021-2022 Standard Performance Evaluation Corporation

Cray

(Test Sponsor: University of Bristol)

SPEChpc 2021_tny_base = 1.80

Isambard 2: XC50 (ThunderX2)

SPEChpc 2021_tny_peak = Not Run

hpc2021 License: ?

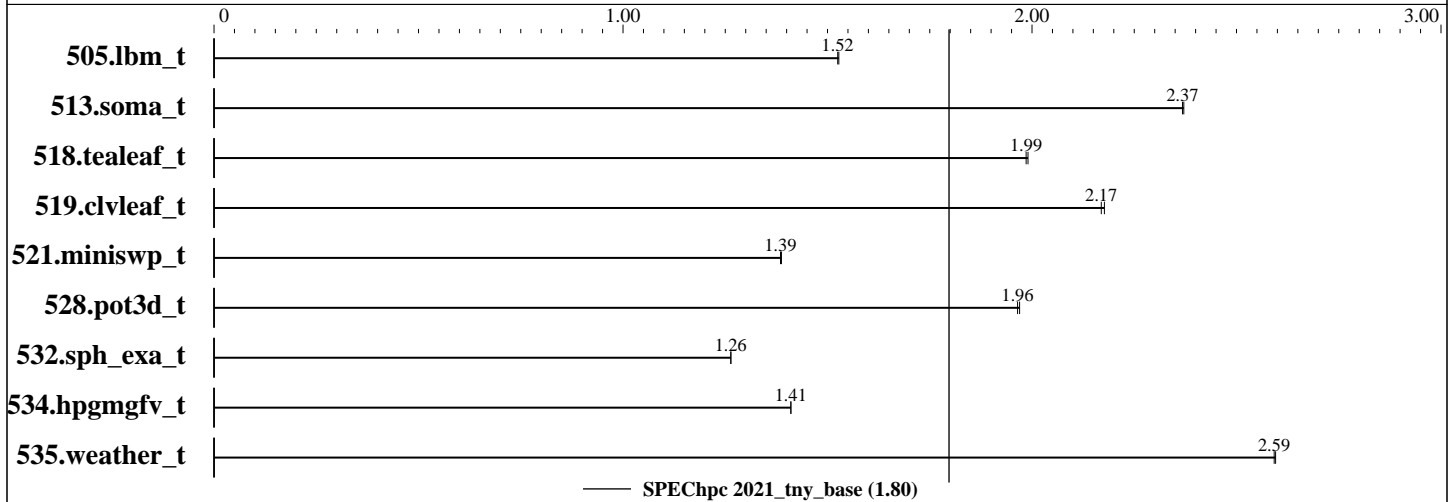
Test Sponsor: University of Bristol

Tested by: University of Bristol

Test Date: Jul-2022

Hardware Availability: May-2018

Software Availability: Mar-2020



Results Table

Benchmark	Base								Peak							
	Model	Ranks	Thrds/Rnk	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Model	Ranks	Thrds/Rnk	Seconds	Ratio	Seconds	Ratio
505.lbm_t	MPI	64	1	1473	1.53	<u>1475</u>	<u>1.52</u>									
513.soma_t	MPI	64	1	1560	2.37	<u>1563</u>	<u>2.37</u>									
518.tealeaf_t	MPI	64	1	<u>831</u>	<u>1.99</u>	829	1.99									
519.clvleaf_t	MPI	64	1	<u>761</u>	<u>2.17</u>	758	2.18									
521.miniswp_t	MPI	64	1	<u>1155</u>	<u>1.39</u>	1153	1.39									
528.pot3d_t	MPI	64	1	<u>1082</u>	<u>1.96</u>	1079	1.97									
532.sph_exa_t	MPI	64	1	<u>1543</u>	<u>1.26</u>	1543	1.26									
534.hpgmgfv_t	MPI	64	1	833	1.41	<u>833</u>	<u>1.41</u>									
535.weather_t	MPI	64	1	1242	2.60	<u>1244</u>	<u>2.59</u>									

SPEChpc 2021_tny_base = 1.80

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 2021-2022 Standard Performance Evaluation Corporation

Cray

(Test Sponsor: University of Bristol)

SPEChpc 2021_tny_base = 1.80

Isambard 2: XC50 (ThunderX2)

SPEChpc 2021_tny_peak = Not Run

hpc2021 License: ?

Test Sponsor: University of Bristol

Tested by: University of Bristol

Test Date: Jul-2022

Hardware Availability: May-2018

Software Availability: Mar-2020

Hardware Summary

Type of System: Homogenous Cluster
Compute Node: ThunderX2
Interconnect: Cray Aries
Compute Nodes Used: 8
Total Chips: 16
Total Cores: 512
Total Threads: 2048
Total Memory: 2 TB
Max. Peak Threads: --

Software Summary

Compiler: HPE Cray Programming Environment (CPE), C/C++/Fortran: Cray clang version 11.0.4
MPI Library: HPE Cray Programming Environment (CPE), Cray-mvapich2 Version 2.3.6
Other MPI Info: --
Other Software: --
Base Parallel Model: MPI
Base Ranks Run: 64
Base Threads Run: 1
Peak Parallel Models: Not Run
Minimum Peak Ranks: --
Maximum Peak Ranks: --
Max. Peak Threads: --
Min. Peak Threads: --

Node Description: ThunderX2

Hardware

Number of nodes: 8
Uses of the node: Compute
Vendor: N/A
Model: N/A
CPU Name: Marvell ThunderX2 CN9980
CPU(s) orderable: N/A
Chips enabled: 2
Cores enabled: 64
Cores per chip: 32
Threads per core: 4
CPU Characteristics: Permanent turbo to 2.5 GHz
CPU MHz: 2100
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 32 MB I+D on chip per chip
0.5 MB shared / 64 cores
Other Cache: None
Memory: 256 GB (8 x 32 GB)
Disk Subsystem: --
Other Hardware: None
Accel Count: N/A
Accel Model: N/A
Accel Vendor: N/A
Accel Type: N/A
Accel Connection: N/A
Accel ECC enabled: N/A
Accel Description: N/A
Adapter: None
Number of Adapters: 0
Slot Type: None

(Continued on next page)

Software

Accelerator Driver: --
Adapter: None
Adapter Driver: None
Adapter Firmware: None
Operating System: SUSE Linux Enterprise Server 15 SP1
Linux 4.12.14-197.7_5.0.99-cray_ari_s
Local File System: xfs
Shared File System: None
System State: Multi-user, run level 3
Other Software: None

SPEChpc™ 2021 Tiny Result

Copyright 2021-2022 Standard Performance Evaluation Corporation

Cray

(Test Sponsor: University of Bristol)

SPEChpc 2021_tny_base = 1.80

Isambard 2: XC50 (ThunderX2)

SPEChpc 2021_tny_peak = Not Run

hpc2021 License: ?

Test Sponsor: University of Bristol

Tested by: University of Bristol

Test Date: Jul-2022

Hardware Availability: May-2018

Software Availability: Mar-2020

Node Description: ThunderX2

Hardware (Continued)

Data Rate: None
Ports Used: 0
Interconnect Type: None

Interconnect Description: Cray Aries

Hardware

Vendor: Cray
Model: N/A
Switch Model: N/A
Number of Switches: N/A
Number of Ports: N/A
Data Rate: 14 Gb/s
Firmware: N/A
Topology: Dragonfly
Primary Use: MPI Traffic

Software

: --

Submit Notes

The config file option 'submit' was used.

Compiler Version Notes

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

```
Cray Fortran : Version 11.0.4
-----
```

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

```
Cray clang version 11.0.4 (bc9473a12d1f2f43cde01f962a11240263bd8908)
Target: aarch64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/cray/pe/cce/11.0.4/cce-clang/aarch64/share/../bin
-----
```

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

(Continued on next page)

SPEChpc™ 2021 Tiny Result

Copyright 2021-2022 Standard Performance Evaluation Corporation

Cray

(Test Sponsor: University of Bristol)

SPEChpc 2021_tny_base = 1.80

Isambard 2: XC50 (ThunderX2)

SPEChpc 2021_tny_peak = Not Run

hpc2021 License: ?

Test Sponsor: University of Bristol

Tested by: University of Bristol

Test Date: Jul-2022

Hardware Availability: May-2018

Software Availability: Mar-2020

Compiler Version Notes (Continued)

Cray clang version 11.0.4 (bc9473a12d1f2f43cde01f962a11240263bd8908)
Target: aarch64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/cray/pe/cce/11.0.4/cce-clang/aarch64/share/../bin

Base Compiler Invocation

C benchmarks:

cc

C++ benchmarks:

CC

Fortran benchmarks:

ftn

Base Optimization Flags

C benchmarks:

-Ofast

C++ benchmarks:

-Ofast

Fortran benchmarks:

-Ofast

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 2022-07-01 17:24:21+0000.

Report generated on 2022-07-01 23:19:39 by hpc2021 PDF formatter v1.0.3.