SPEC® MPIM2007 Result

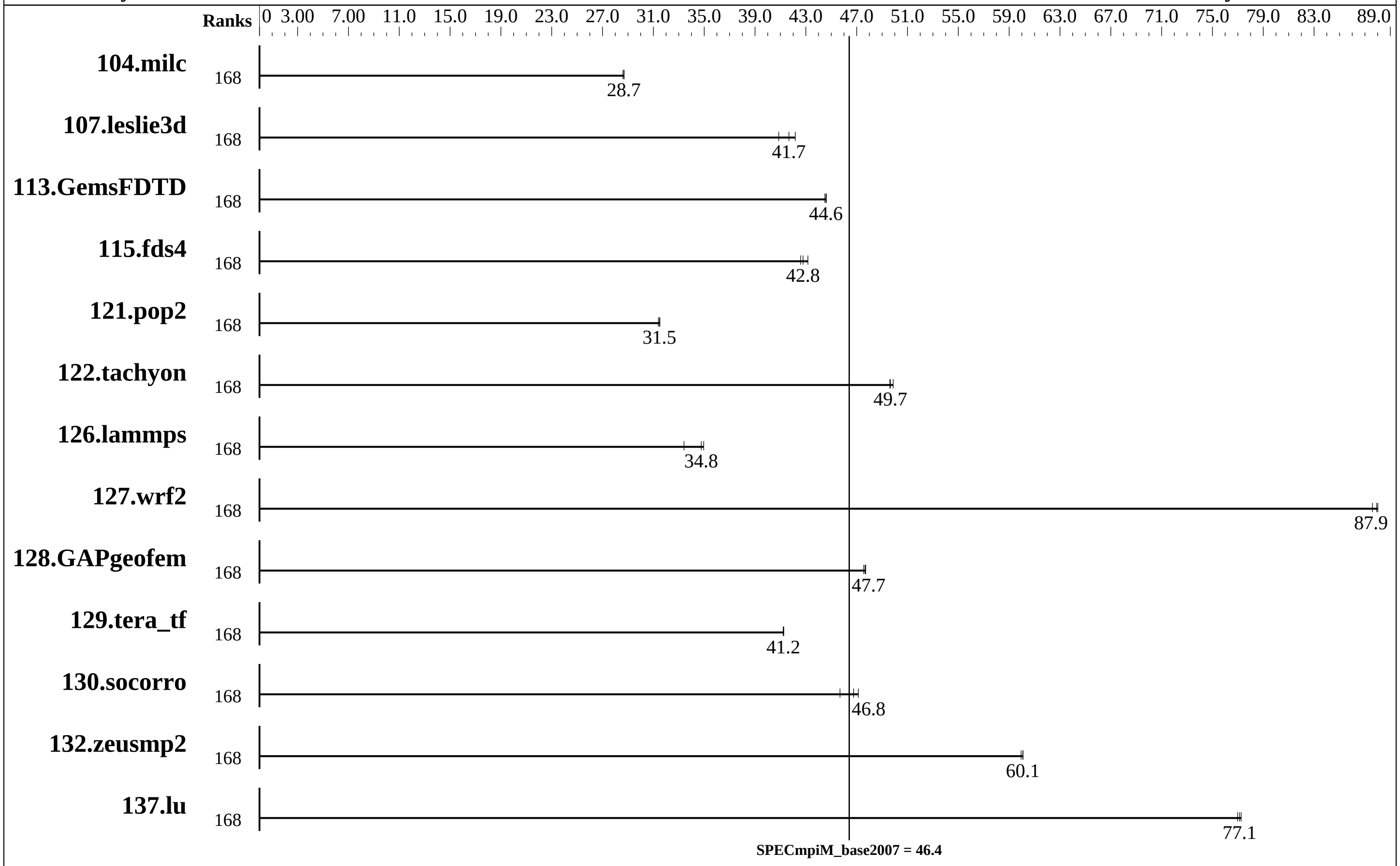
Huawei

Huawei Kunlun 9008 V5 (Intel Xeon Platinum 8280 CPU, 2.70 GHz)

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 46.4

MPI2007 license:	27	**Test date:**	Mar-2019
Test sponsor:	Huawei	**Hardware Availability:**	Jun-2019
Tested by:	Huawei	**Software Availability:**	Feb-2019



Results Table

Benchmark	Base Ranks	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Ranks	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
104.milc	168	**54.6**	**28.7**	54.5	28.7	54.7	28.6							
107.leslie3d	168	124	42.2	128	40.9	**125**	**41.7**							
113.GemsFDTD	168	**141**	**44.6**	141	44.6	142	44.5							
115.fds4	168	45.2	43.2	**45.6**	**42.8**	45.8	42.6							
121.pop2	168	131	31.4	**131**	**31.5**	131	31.5							
122.tachyon	168	**56.3**	**49.7**	56.4	49.6	56.1	49.9							
126.lammps	168	87.2	33.4	83.4	35.0	**83.8**	**34.8**							
127.wrf2	168	89.0	87.6	88.6	88.0	**88.7**	**87.9**							
128.GAPgeofem	168	43.3	47.7	43.4	47.6	**43.3**	**47.7**							
129.tera_tf	168	**67.1**	**41.2**	67.1	41.3	67.2	41.2							

Table continues on next page. Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Results Table (Continued)

	Base							Peak						
Benchmark	**Ranks**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Ranks**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
130.socorro	168	83.5	45.7	**81.6**	**46.8**	81.0	47.1							
132.zeusmp2	168	**51.6**	**60.1**	51.8	59.9	51.6	60.1							
137.lu	168	47.6	77.3	**47.7**	**77.1**	47.8	77.0							

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

Hardware Summary

Type of System:	Homogeneous
Compute Node:	Huawei Kunlun 9008 V5
File Server Node:	Huawei Kunlun 9008 V5
Head Node:	Huawei Kunlun 9008 V5
Total Compute Nodes:	1
Total Chips:	6
Total Cores:	168
Total Threads:	168
Total Memory:	1152 GB
Base Ranks Run:	168
Minimum Peak Ranks:	--
Maximum Peak Ranks:	--

Software Summary

C Compiler:	Intel C++ Composer XE 2018 for Linux, Version 18.0.5
C++ Compiler:	Intel C++ Composer XE 2018 for Linux, Version 18.0.5
Fortran Compiler:	Intel Fortran Composer XE 2018 for Linux, Version 18.0.5
Base Pointers:	64-bit
Peak Pointers:	Not Applicable
MPI Library:	Intel MPI Library for Linux, Version 2018 Update 4
Other MPI Info:	None
Pre-processors:	No
Other Software:	None

Node Description: Huawei Kunlun 9008 V5

Hardware

Number of nodes:	1
Uses of the node:	head, compute, fileserver
Vendor:	Huawei
Model:	Huawei Kunlun 9008 V5
CPU Name:	Intel Xeon Platinum 8280
CPU(s) orderable:	2,4,6,8 chip
Chips enabled:	6
Cores enabled:	168
Cores per chip:	28
Threads per core:	1
CPU Characteristics:	None
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:	38.5 MB I+D on chip per chip
Other Cache:	None
Memory:	1152 GB (36 x 32 GB 2Rx4 PC4-2933Y-R)
Disk Subsystem:	2 x 900 GB 10K RPM SAS HDD,RAID 0
Other Hardware:	None
Adapter:	N/A
Number of Adapters:	0
Slot Type:	N/A
Data Rate:	N/A

Continued on next page

Software

Adapter:	N/A
Adapter Driver:	N/A
Adapter Firmware:	N/A
Operating System:	SUSE Linux Enterprise Server 12 SP4 4.12.14-94.41-default
Local File System:	btrfs
Shared File System:	None
System State:	Multi-User, run level 3
Other Software:	None

SPEC MPIM2007 Result

Huawei

Huawei Kunlun 9008 V5 (Intel Xeon Platinum 8280 CPU, 2.70 GHz)

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 46.4

MPI2007 license: 27		**Test date:**	Mar-2019
Test sponsor:	Huawei	**Hardware Availability:**	Jun-2019
Tested by:	Huawei	**Software Availability:**	Feb-2019

Node Description: Huawei Kunlun 9008 V5

Ports Used:	0
Interconnect Type:	N/A

Submit Notes

```
The config file option 'submit' was used.
```

General Notes

```
 MPI startup command:
   mpiexec.hydra command was used to start MPI jobs.

 BIOS settings:
   Intel Hyper-Threading Technology :Disabled
   Intel Turbo Boost Technology :Enabled (default is Enabled)
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2)
is mitigated in the system as tested and documented.
```

Base Compiler Invocation

C benchmarks:
`mpiicc`

C++ benchmarks:

126.lammps: `mpiicpc`

Fortran benchmarks:
`mpiifort`

Benchmarks using both Fortran and C:
`mpiicc mpiifort`

Base Portability Flags

121.pop2: `-DSPEC_MPI_CASE_FLAG`
126.lammps: `-DMPICH_IGNORE_CXX_SEEK`
127.wrf2: `-DSPEC_MPI_CASE_FLAG -DSPEC_MPI_LINUX`

Base Optimization Flags

C benchmarks:
`-O3 -xCORE-AVX2 -no-prec-div`

C++ benchmarks:

126.lammps: `-O3 -xCORE-AVX2 -no-prec-div`

Fortran benchmarks:
`-O3 -xCORE-AVX2 -no-prec-div`

Benchmarks using both Fortran and C:
`-O3 -xCORE-AVX2 -no-prec-div`

The flags file that was used to format this result can be browsed at
http://www.spec.org/mpi2007/flags/Huawei_x86_64_Intel_linux.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/mpi2007/flags/Huawei_x86_64_Intel_linux.xml

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

Tested with SPEC MPI2007 v2.0.1.
Report generated on Tue Apr 2 18:30:43 2019 by SPEC MPI2007 PS/PDF formatter v1463.
Originally published on 2 April 2019.