

SPEC ACCEL™ ACC Result

Copyright 2015-2019 Standard Performance Evaluation Corporation

IBM

(Test Sponsor: NVIDIA Corporation)

IBM POWER 9

Power Server AC922 (8335-GTC)

SPECaccel_acc_peak = Not Run

SPECaccel_acc_base = 3.05

ACCEL license: 019

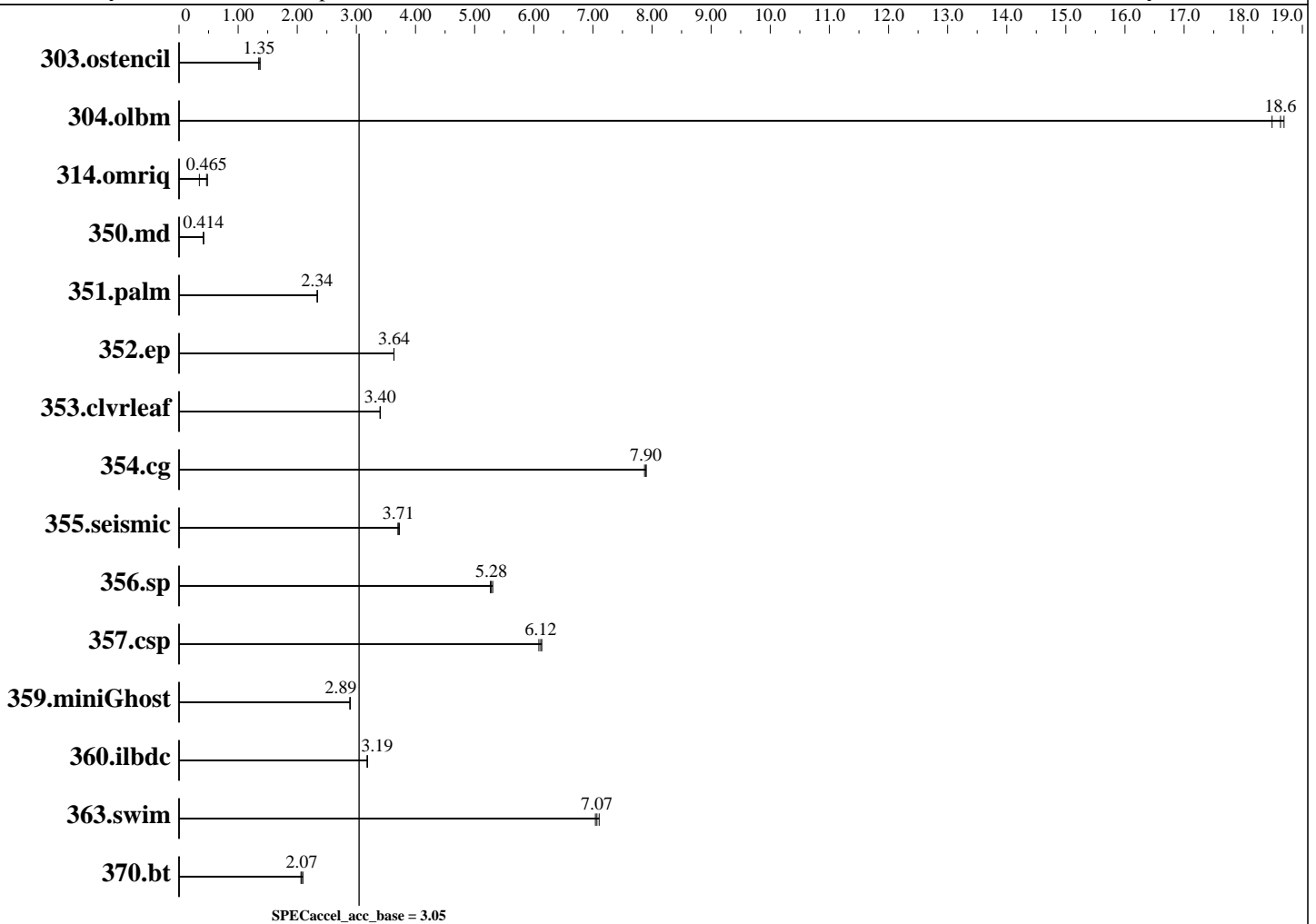
Test sponsor: NVIDIA Corporation

Tested by: NVIDIA Corporation

Test date: Nov-2019

Hardware Availability: Dec-2017

Software Availability: Nov-2019



Hardware

CPU Name: POWER9, altivec supported
CPU Characteristics:
CPU MHz: 2300
CPU MHz Maximum: 3800
FPU: --
CPU(s) enabled: 40 cores, could not determine chips, 20 cores/chip, 4 threads/core
CPU(s) orderable: 1-2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 512 KB I+D on chip per core
L3 Cache: 10 MB I+D on chip per chip
Other Cache: None

Continued on next page

Accelerator

Accel Model Name: POWER 9
Accel Vendor: IBM
Accel Name: IBM POWER 9
Type of Accel: CPU
Accel Connection: Not applicable
Does Accel Use ECC: Yes
Accel Description: --
Accel Driver: --

SPEC ACCEL ACC Result

Copyright 2015-2019 Standard Performance Evaluation Corporation

IBM

(Test Sponsor: NVIDIA Corporation)

IBM POWER 9

Power Server AC922 (8335-GTC)

SPECaccel_acc_peak = Not Run

SPECaccel_acc_base = 3.05

ACCEL license: 019

Test sponsor: NVIDIA Corporation

Tested by: NVIDIA Corporation

Test date: Nov-2019

Hardware Availability: Dec-2017

Software Availability: Nov-2019

Hardware (Continued)

Memory: 144 GB
143.291 GB fixme: If using DDR3, format is:
'N GB (M x N GB nRxN PCn-nnnnnR-n, ECC)'
Disk Subsystem: 927 GB add more disk info here
Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 7.5 (Maipo)
Red Hat Enterprise Linux Server release 7.5 (Maipo)
4.14.0-49.8.1.el7a.ibmvidia.6.1.ppc64le
Compiler: C/C++/Fortran : Version 19.10 of PGI Professional Edition
File System: xfs
System State: Run level 3 (add definition here)
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
303.ostencil	107	1.35	106	1.37	108	1.35						
304.olbm	24.4	18.6	24.3	18.7	24.6	18.5						
314.omriq	2054	0.465	1987	0.481	2782	0.344						
350.md	610	0.413	609	0.414	609	0.414						
351.palm	158	2.34	158	2.34	158	2.34						
352.ep	146	3.63	146	3.64	146	3.64						
353.clvleaf	131	3.40	131	3.40	131	3.40						
354.cg	51.6	7.90	51.8	7.87	51.7	7.90						
355.seismic	99.3	3.73	99.8	3.71	99.9	3.70						
356.sp	52.2	5.28	52.4	5.27	52.0	5.31						
357.csp	44.0	6.14	44.1	6.12	44.4	6.09						
359.miniGhost	128	2.89	127	2.89	127	2.90						
360.ilbdc	115	3.19	115	3.18	115	3.19						
363.swim	32.5	7.07	32.7	7.04	32.4	7.11						
370.bt	107	2.07	106	2.09	108	2.06						

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

SPEC ACCEL ACC Result

Copyright 2015-2019 Standard Performance Evaluation Corporation

IBM

(Test Sponsor: NVIDIA Corporation)

IBM POWER 9

Power Server AC922 (8335-GTC)

SPECaccel_acc_peak = Not Run

SPECaccel_acc_base = 3.05

ACCEL license: 019

Test sponsor: NVIDIA Corporation

Tested by: NVIDIA Corporation

Test date: Nov-2019

Hardware Availability: Dec-2017

Software Availability: Nov-2019

Submit Notes

The config file option 'submit' was used.

Platform Notes

```
Sysinfo program /local/home/cparrott/SPEC/ACCEL-1.3/Docs/sysinfo
$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3fe1df68447e8a35
running on perf-wsn1 Thu Nov 14 13:25:29 2019
```

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see: <http://www.spec.org/accel/Docs/config.html#sysinfo>

```
From /proc/cpuinfo
  clock : 3616.000000MHz
  machine : PowerNV 8335-GTC.....
  model : 8335-GTC.....
  platform : PowerNV
  revision : 2.2 (pvr 004e 1202)
  cpu : POWER9, altivec supported
```

```
*
* 0 "physical id" tags found. Perhaps this is an older system,
* or a virtualized system. Not attempting to guess how to
* count chips/cores for this system.
*
```

```
160 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
caution.)
```

```
From /proc/meminfo
MemTotal: 150251584 kB
HugePages_Total: 0
Hugepagesize: 2048 kB
```

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 7.5 (Maipo)
```

```
From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.5 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VARIANT="Server"
VARIANT_ID="server"
VERSION_ID="7.5"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.5 (Maipo)"
redhat-release: Red Hat Enterprise Linux Server release 7.5 (Maipo)
```

Continued on next page

SPEC ACCEL ACC Result

Copyright 2015-2019 Standard Performance Evaluation Corporation

IBM

(Test Sponsor: NVIDIA Corporation)

IBM POWER 9

Power Server AC922 (8335-GTC)

SPECaccel_acc_peak = Not Run

SPECaccel_acc_base = 3.05

ACCEL license: 019

Test sponsor: NVIDIA Corporation

Tested by: NVIDIA Corporation

Test date: Nov-2019

Hardware Availability: Dec-2017

Software Availability: Nov-2019

Platform Notes (Continued)

system-release: Red Hat Enterprise Linux Server release 7.5 (Maipo)

system-release-cpe: cpe:/o:redhat:enterprise_linux:7.5:ga:server

uname -a:

```
Linux perf-wsn1 4.14.0-49.8.1.el7a.ibm.nvidia.6.1.ppc64le #1 SMP Tue Jun 5  
13:56:12 -03 2018 ppc64le ppc64le ppc64le GNU/Linux
```

run-level 3 Oct 6 15:08

SPEC is set to: /local/home/cparrott/SPEC/ACCEL-1.3

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/mapper/rhel_wsn1-root	xfs	927G	186G	742G	20%	/

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:

ACC_NUM_CORES = "80"

HUGETLB_PATH = "/mnt/hugetlb"

KMP_THREAD_LIMIT = "80"

OMP_PROC_BIND = "true"

OMP_THREAD_LIMIT = "80"

Base Compiler Invocation

C benchmarks:

pgcc

Fortran benchmarks:

pgfortran

Benchmarks using both Fortran and C:

pgcc pgfortran

Base Optimization Flags

C benchmarks:

-fast -Mfprelaxed=intrinsic -Mnouniform -acc -ta=multicore:nvomp

Fortran benchmarks:

-fast -Mfprelaxed=intrinsic -Mnouniform -acc -ta=multicore:nvomp

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/

Page 4

SPEC ACCEL ACC Result

Copyright 2015-2019 Standard Performance Evaluation Corporation

IBM

(Test Sponsor: NVIDIA Corporation)

IBM POWER 9

Power Server AC922 (8335-GTC)

SPECaccel_acc_peak = Not Run

SPECaccel_acc_base = 3.05

ACCEL license: 019

Test sponsor: NVIDIA Corporation

Tested by: NVIDIA Corporation

Test date: Nov-2019

Hardware Availability: Dec-2017

Software Availability: Nov-2019

Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

353.clvleaf: -fast -Mfprelaxed=intrinsic -Mnouniform -acc
-ta=multicore:nvomp

359.miniGhost: -fast -Mfprelaxed=intrinsic -Mnouniform -acc
-ta=multicore:nvomp -Mnomain

SPEC ACCEL 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 webmaster@spec.org.

Tested with SPEC ACCEL v1.3.
Report generated on Thu Nov 14 17:18:07 2019 by SPEC ACCEL PS/PDF formatter v2947.