



SPEC CPU®2017 Integer Rate Result

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Inspur Corporation

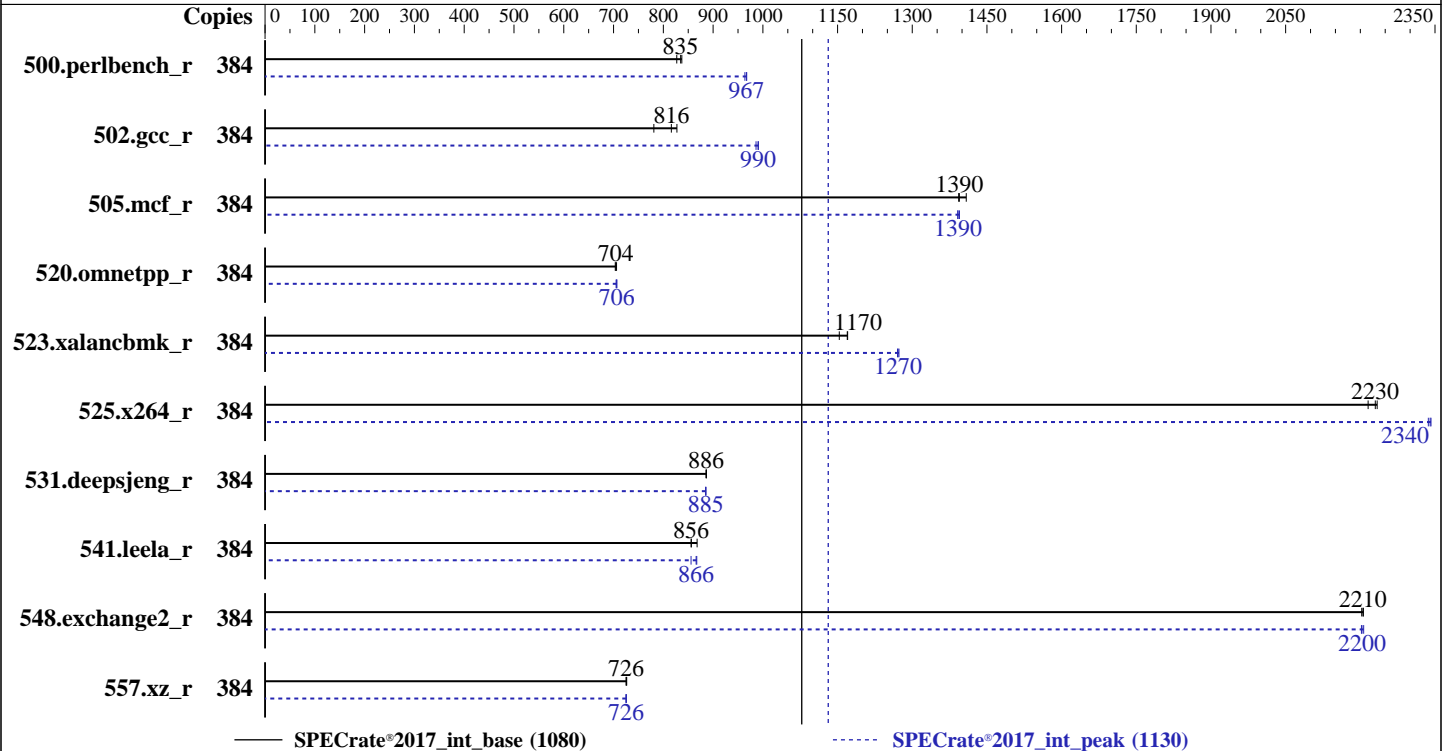
SPECrate®2017_int_base = 1080

Inspur TS860M5 (Intel Xeon Platinum 8260)

SPECrate®2017_int_peak = 1130

CPU2017 License: 3358
Test Sponsor: Inspur Corporation
Tested by: Inspur Corporation

Test Date: Mar-2020
Hardware Availability: Apr-2019
Software Availability: May-2019



Hardware

CPU Name: Intel Xeon Platinum 8260
Max MHz: 3900
Nominal: 2400
Enabled: 192 cores, 8 chips, 2 threads/core
Orderable: 2,4,6,8 chips
Cache L1: 32 KB I + 32 KB D on chip per core
L2: 1 MB I+D on chip per core
L3: 35.75 MB I+D on chip per chip
Other: None
Memory: 1536 GB (96 x 16 GB 2Rx4 PC4-2933Y-R)
Storage: 1 x 2 TB SATA SSD
Other: None

Software

OS: SUSE Linux Enterprise Server 12 SP4
4.12.14-94.41-default
Compiler: C/C++: Version 19.0.4.227 of Intel C/C++
Compiler Build 20190416 for Linux;
Fortran: Version 19.0.4.227 of Intel Fortran
Compiler Build 20190416 for Linux
Parallel: No
Firmware: Version 4.1.09 released Jun-2019
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other: jemalloc memory allocator V5.0.1
Power Management: BIOS and OS set to prefer performance at the cost of additional power usage.



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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	384	730	837	<u>732</u>	<u>835</u>	739	827	384	<u>632</u>	<u>967</u>	632	967	634	964
502.gcc_r	384	696	781	657	827	<u>666</u>	<u>816</u>	384	<u>549</u>	<u>990</u>	549	991	551	986
505.mcf_r	384	441	1410	445	1390	<u>445</u>	<u>1390</u>	384	446	1390	445	1390	<u>446</u>	<u>1390</u>
520.omnetpp_r	384	716	703	<u>715</u>	<u>704</u>	714	706	384	713	706	<u>713</u>	<u>706</u>	715	705
523.xalancbmk_r	384	347	1170	352	1150	<u>347</u>	<u>1170</u>	384	319	1270	<u>319</u>	<u>1270</u>	318	1270
525.x264_r	384	303	2220	<u>302</u>	<u>2230</u>	301	2230	384	<u>287</u>	<u>2340</u>	287	2340	288	2340
531.deepsjeng_r	384	496	887	<u>497</u>	<u>886</u>	497	886	384	497	885	<u>497</u>	<u>885</u>	497	885
541.leela_r	384	733	868	743	856	<u>743</u>	<u>856</u>	384	733	867	743	856	<u>734</u>	<u>866</u>
548.exchange2_r	384	456	2210	457	2200	<u>456</u>	<u>2210</u>	384	<u>457</u>	<u>2200</u>	456	2210	457	2200
557.xz_r	384	571	726	572	725	<u>572</u>	<u>726</u>	384	572	725	<u>572</u>	<u>726</u>	572	726

SPECrate®2017_int_base = **1080**

SPECrate®2017_int_peak = **1130**

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

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH =
"/home/CPU2017/lib/intel64:/home/CPU2017/lib/ia32:/home/CPU2017/je5.0.1-32"

General Notes

Binaries compiled on a system with 1x Intel Core i9-7900X CPU + 32GB RAM
memory using Redhat Enterprise Linux 7.5
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:
sync; echo 3> /proc/sys/vm/drop_caches
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>

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General Notes (Continued)

NA: 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.

jemalloc, a general purpose malloc implementation
built with the RedHat Enterprise 7.5,
and the system compiler gcc 4.8.5;
sources available from jemalloc.net or
<https://github.com/jemalloc/jemalloc/releases>

Platform Notes

BIOS and OS configuration:

SCALING_GOVERNOR set to Performance

Hardware Prefetch set to Disable

VT Support set to Disable

ClE Support set to Disable

IMC (Integrated memory controller) Interleaving set to 1-way

Sub NUMA Cluster (SNC) set to Enable

Sysinfo program /home/CPU2017/bin/sysinfo

Rev: r6365 of 2019-08-21 295195f888a3d7edble6e46a485a0011

running on linux-dty6 Fri Mar 20 06:54:46 2020

SUT (System Under Test) info as seen by some common utilities.

For more information on this section, see

<https://www.spec.org/cpu2017/Docs/config.html#sysinfo>

From /proc/cpuinfo

model name : Intel(R) Xeon(R) Platinum 8260 CPU @ 2.40GHz

8 "physical id"s (chips)

384 "processors"

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

cpu cores : 24

siblings : 48

physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 25 26 27 28 29

physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 25 26 27 28 29

physical 2: cores 0 1 2 3 4 5 6 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29

physical 3: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 25 26 27 28 29

physical 4: cores 0 1 2 3 4 5 6 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29

physical 5: cores 0 1 2 3 4 5 6 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29

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Platform Notes (Continued)

physical 6: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 25 26 27 28 29
physical 7: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 25 26 27 28 29

From lscpu:

```

Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:             Little Endian
CPU(s):                 384
On-line CPU(s) list:   0-383
Thread(s) per core:    2
Core(s) per socket:    24
Socket(s):              8
NUMA node(s):          16
Vendor ID:              GenuineIntel
CPU family:             6
Model:                  85
Model name:             Intel(R) Xeon(R) Platinum 8260 CPU @ 2.40GHz
Stepping:               7
CPU MHz:                2400.000
CPU max MHz:            3900.0000
CPU min MHz:            1000.0000
BogoMIPS:               4800.00
Virtualization:         VT-x
L1d cache:              32K
L1i cache:              32K
L2 cache:               1024K
L3 cache:               36608K
NUMA node0 CPU(s):     0-3,7-9,13-15,19,20,192-195,199-201,205-207,211,212
NUMA node1 CPU(s):     4-6,10-12,16-18,21-23,196-198,202-204,208-210,213-215
NUMA node2 CPU(s):     24-27,31-33,37-39,43,44,216-219,223-225,229-231,235,236
NUMA node3 CPU(s):     28-30,34-36,40-42,45-47,220-222,226-228,232-234,237-239
NUMA node4 CPU(s):     48-51,55,56,60-62,66-68,240-243,247,248,252-254,258-260
NUMA node5 CPU(s):     52-54,57-59,63-65,69-71,244-246,249-251,255-257,261-263
NUMA node6 CPU(s):     72-75,79-81,85-87,91,92,264-267,271-273,277-279,283,284
NUMA node7 CPU(s):     76-78,82-84,88-90,93-95,268-270,274-276,280-282,285-287
NUMA node8 CPU(s):     96-99,103,104,108-110,114-116,288-291,295,296,300-302,306-308
NUMA node9 CPU(s):     100-102,105-107,111-113,117-119,292-294,297-299,303-305,309-311
NUMA node10 CPU(s):    120-123,127,128,132-134,138-140,312-315,319,320,324-326,330-332
NUMA node11 CPU(s):    124-126,129-131,135-137,141-143,316-318,321-323,327-329,333-335
NUMA node12 CPU(s):    144-147,151-153,157-159,163,164,336-339,343-345,349-351,355,356
NUMA node13 CPU(s):    148-150,154-156,160-162,165-167,340-342,346-348,352-354,357-359
NUMA node14 CPU(s):

```

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Platform Notes (Continued)

168-171,175-177,181-183,187,188,360-363,367-369,373-375,379,380

NUMA node15 CPU(s):

172-174,178-180,184-186,189-191,364-366,370-372,376-378,381-383

Flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc cpuid aperfmperf pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cdp_l3 invpcid_single intel_ppin ssbd mba ibrs ibpb stibp tpr_shadow vnmi flexpriority ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt avx512cd avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local dtherm ida arat pln pts hwp hwp_act_window hwp_epp hwp_pkg_req pku ospke avx512_vnni flush_lld arch_capabilities

/proc/cpuinfo cache data
cache size : 36608 KB

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a physical chip.

available: 16 nodes (0-15)
node 0 cpus: 0 1 2 3 7 8 9 13 14 15 19 20 192 193 194 195 199 200 201 205 206 207 211 212
node 0 size: 95297 MB
node 0 free: 94820 MB
node 1 cpus: 4 5 6 10 11 12 16 17 18 21 22 23 196 197 198 202 203 204 208 209 210 213 214 215
node 1 size: 96760 MB
node 1 free: 96258 MB
node 2 cpus: 24 25 26 27 31 32 33 37 38 39 43 44 216 217 218 219 223 224 225 229 230 231 235 236
node 2 size: 96760 MB
node 2 free: 96603 MB
node 3 cpus: 28 29 30 34 35 36 40 41 42 45 46 47 220 221 222 226 227 228 232 233 234 237 238 239
node 3 size: 96760 MB
node 3 free: 96607 MB
node 4 cpus: 48 49 50 51 55 56 60 61 62 66 67 68 240 241 242 243 247 248 252 253 254 258 259 260
node 4 size: 96760 MB
node 4 free: 96528 MB
node 5 cpus: 52 53 54 57 58 59 63 64 65 69 70 71 244 245 246 249 250 251 255 256 257 261 262 263
node 5 size: 96760 MB
node 5 free: 96576 MB
node 6 cpus: 72 73 74 75 79 80 81 85 86 87 91 92 264 265 266 267 271 272 273 277 278

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Platform Notes (Continued)

```

279 283 284
node 6 size: 96760 MB
node 6 free: 96229 MB
node 7 cpus: 76 77 78 82 83 84 88 89 90 93 94 95 268 269 270 274 275 276 280 281 282
285 286 287
node 7 size: 96760 MB
node 7 free: 96385 MB
node 8 cpus: 96 97 98 99 103 104 108 109 110 114 115 116 288 289 290 291 295 296 300
301 302 306 307 308
node 8 size: 96760 MB
node 8 free: 96551 MB
node 9 cpus: 100 101 102 105 106 107 111 112 113 117 118 119 292 293 294 297 298 299
303 304 305 309 310 311
node 9 size: 96760 MB
node 9 free: 96607 MB
node 10 cpus: 120 121 122 123 127 128 132 133 134 138 139 140 312 313 314 315 319 320
324 325 326 330 331 332
node 10 size: 96760 MB
node 10 free: 96601 MB
node 11 cpus: 124 125 126 129 130 131 135 136 137 141 142 143 316 317 318 321 322 323
327 328 329 333 334 335
node 11 size: 96760 MB
node 11 free: 96599 MB
node 12 cpus: 144 145 146 147 151 152 153 157 158 159 163 164 336 337 338 339 343 344
345 349 350 351 355 356
node 12 size: 96760 MB
node 12 free: 96597 MB
node 13 cpus: 148 149 150 154 155 156 160 161 162 165 166 167 340 341 342 346 347 348
352 353 354 357 358 359
node 13 size: 96760 MB
node 13 free: 96607 MB
node 14 cpus: 168 169 170 171 175 176 177 181 182 183 187 188 360 361 362 363 367 368
369 373 374 375 379 380
node 14 size: 96760 MB
node 14 free: 96521 MB
node 15 cpus: 172 173 174 178 179 180 184 185 186 189 190 191 364 365 366 370 371 372
376 377 378 381 382 383
node 15 size: 96501 MB
node 15 free: 96270 MB
node distances:
node 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
0: 10 11 21 21 31 31 21 21 31 31 21 21 31 31 31 31
1: 11 10 21 21 31 31 21 21 31 31 21 21 31 31 31 31
2: 21 21 10 11 21 21 31 31 21 21 31 31 31 31 31 31
3: 21 21 11 10 21 21 31 31 21 21 31 31 31 31 31 31
4: 31 31 21 21 10 11 21 21 31 31 31 31 21 21 31 31
5: 31 31 21 21 11 10 21 21 31 31 31 31 21 21 31 31

```

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Platform Notes (Continued)

6:	21	21	31	31	21	21	10	11	31	31	31	31	31	21	21
7:	21	21	31	31	21	21	11	10	31	31	31	31	31	21	21
8:	31	31	21	21	31	31	31	31	10	11	21	21	31	31	21
9:	31	31	21	21	31	31	31	31	11	10	21	21	31	31	21
10:	21	21	31	31	31	31	31	31	21	21	10	11	21	21	31
11:	21	21	31	31	31	31	31	31	21	21	11	10	21	21	31
12:	31	31	31	31	21	21	31	31	31	31	21	21	10	11	21
13:	31	31	31	31	21	21	31	31	31	31	21	21	11	10	21
14:	31	31	31	31	31	31	21	21	21	21	31	31	21	21	10
15:	31	31	31	31	31	31	21	21	21	21	31	31	21	21	11

From /proc/meminfo

```
MemTotal:      1583560592 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

/usr/bin/lsb_release -d

SUSE Linux Enterprise Server 12 SP4

From /etc/*release* /etc/*version*

```
SuSE-release:
  SUSE Linux Enterprise Server 12 (x86_64)
  VERSION = 12
  PATCHLEVEL = 4
  # This file is deprecated and will be removed in a future service pack or release.
  # Please check /etc/os-release for details about this release.
```

os-release:

```
NAME="SLES"
VERSION="12-SP4"
VERSION_ID="12.4"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP4"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp4"
```

uname -a:

```
Linux linux-dty6 4.12.14-94.41-default #1 SMP Wed Oct 31 12:25:04 UTC 2018 (3090901)
x86_64 x86_64 x86_64 GNU/Linux
```

Kernel self-reported vulnerability status:

```
CVE-2018-3620 (L1 Terminal Fault):      Not affected
Microarchitectural Data Sampling:      No status reported
CVE-2017-5754 (Meltdown):              Not affected
CVE-2018-3639 (Speculative Store Bypass): Mitigation: Speculative Store Bypass disabled via prctl and seccomp
CVE-2017-5753 (Spectre variant 1):      Mitigation: __user pointer sanitization
```

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Platform Notes (Continued)

CVE-2017-5715 (Spectre variant 2): Mitigation: Indirect Branch Restricted Speculation, IBPB, IBRS_FW

run-level 3 Mar 20 06:53 last=5

SPEC is set to: /home/CPU2017

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sdb4	xfs	1.8T	7.9G	1.8T	1%	/home

```

From /sys/devices/virtual/dmi/id
  BIOS:      Inspur 4.1.09 06/20/2019
  Vendor:    Inspur
  Product:   TS860M5
  Product Family: Type1Family
  Serial:    219179468

```

Additional information from dmidecode follows. WARNING: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

Memory:
96x Hynix HMA82GR7DJR8N-WM 16 GB 2 rank 2933

(End of data from sysinfo program)

Compiler Version Notes

=====
C | 502.gcc_r(peak)

Intel(R) C Intel(R) 64 Compiler for applications running on IA-32, Version
19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

=====
C | 500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak)
| 525.x264_r(base, peak) 557.xz_r(base, peak)

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=====
C | 502.gcc_r(peak)

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Intel(R) C Intel(R) 64 Compiler for applications running on IA-32, Version
19.0.4.227 Build 20190416

Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

=====
C | 500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak)
525.x264_r(base, peak) 557.xz_r(base, peak)

Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.4.227 Build 20190416

Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

=====
C++ | 523.xalancbmk_r(peak)

Intel(R) C++ Intel(R) 64 Compiler for applications running on IA-32, Version
19.0.4.227 Build 20190416

Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

=====
C++ | 520.omnetpp_r(base, peak) 523.xalancbmk_r(base)
531.deepsjeng_r(base, peak) 541.leela_r(base, peak)

Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.4.227 Build 20190416

Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

=====
C++ | 523.xalancbmk_r(peak)

Intel(R) C++ Intel(R) 64 Compiler for applications running on IA-32, Version
19.0.4.227 Build 20190416

Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

=====
C++ | 520.omnetpp_r(base, peak) 523.xalancbmk_r(base)
531.deepsjeng_r(base, peak) 541.leela_r(base, peak)

Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.4.227 Build 20190416

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Compiler Version Notes (Continued)

=====
Fortran | 548.exchange2_r(base, peak)

Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

Base Compiler Invocation

C benchmarks:

icc -m64 -std=c11

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Base Portability Flags

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -DSPEC_LP64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:

-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64
-lqkmalloc

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Inspur TS860M5 (Intel Xeon Platinum 8260)

SPECrate®2017_int_peak = 1130

CPU2017 License: 3358

Test Sponsor: Inspur Corporation

Tested by: Inspur Corporation

Test Date: Mar-2020

Hardware Availability: Apr-2019

Software Availability: May-2019

Base Optimization Flags (Continued)

C++ benchmarks:

```
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=4  
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64  
-lqkmalloc
```

Fortran benchmarks:

```
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=4 -nostandard-realloc-lhs -align array32byte  
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64  
-lqkmalloc
```

Peak Compiler Invocation

C benchmarks (except as noted below):

```
icc -m64 -std=c11
```

```
502.gcc_r: icc -m32 -std=c11 -L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/ia32_lin
```

C++ benchmarks (except as noted below):

```
icpc -m64
```

```
523.xalancbmk_r: icpc -m32 -L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/ia32_lin
```

Fortran benchmarks:

```
ifort -m64
```

Peak Portability Flags

```
500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64  
502.gcc_r: -D_FILE_OFFSET_BITS=64  
505.mcf_r: -DSPEC_LP64  
520.omnetpp_r: -DSPEC_LP64  
523.xalancbmk_r: -D_FILE_OFFSET_BITS=64 -DSPEC_LINUX  
525.x264_r: -DSPEC_LP64  
531.deepsjeng_r: -DSPEC_LP64  
541.leela_r: -DSPEC_LP64  
548.exchange2_r: -DSPEC_LP64  
557.xz_r: -DSPEC_LP64
```



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Peak Optimization Flags

C benchmarks:

```
500.perlbench_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo
-xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=4
-fno-strict-overflow
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64
-lqkmalloc
```

```
502.gcc_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo
-xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=4
-L/usr/local/je5.0.1-32/lib -ljemalloc
```

```
505.mcf_r: -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64
-lqkmalloc
```

```
525.x264_r: -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -fno-alias
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64
-lqkmalloc
```

557.xz_r: Same as 505.mcf_r

C++ benchmarks:

```
520.omnetpp_r: -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64
-lqkmalloc
```

```
523.xalancbmk_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo
-xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=4
-L/usr/local/je5.0.1-32/lib -ljemalloc
```

531.deepsjeng_r: Same as 520.omnetpp_r

541.leela_r: Same as 520.omnetpp_r

Fortran benchmarks:

```
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -nostandard-realloc-lhs -align array32byte
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64
-lqkmalloc
```



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The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/Intel-ic19.0u1-official-linux64.2019-07-09.html>

<http://www.spec.org/cpu2017/flags/Inspur-Platform-Settings-V1.6.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2017/flags/Intel-ic19.0u1-official-linux64.2019-07-09.xml>

<http://www.spec.org/cpu2017/flags/Inspur-Platform-Settings-V1.6.xml>

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