



SPEC® CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Lenovo Global Technology

ThinkSystem SR950
(2.00 GHz, Intel Xeon Platinum 8164)

SPECrate2017_int_base = 957

SPECrate2017_int_peak = 1010

CPU2017 License: 9017

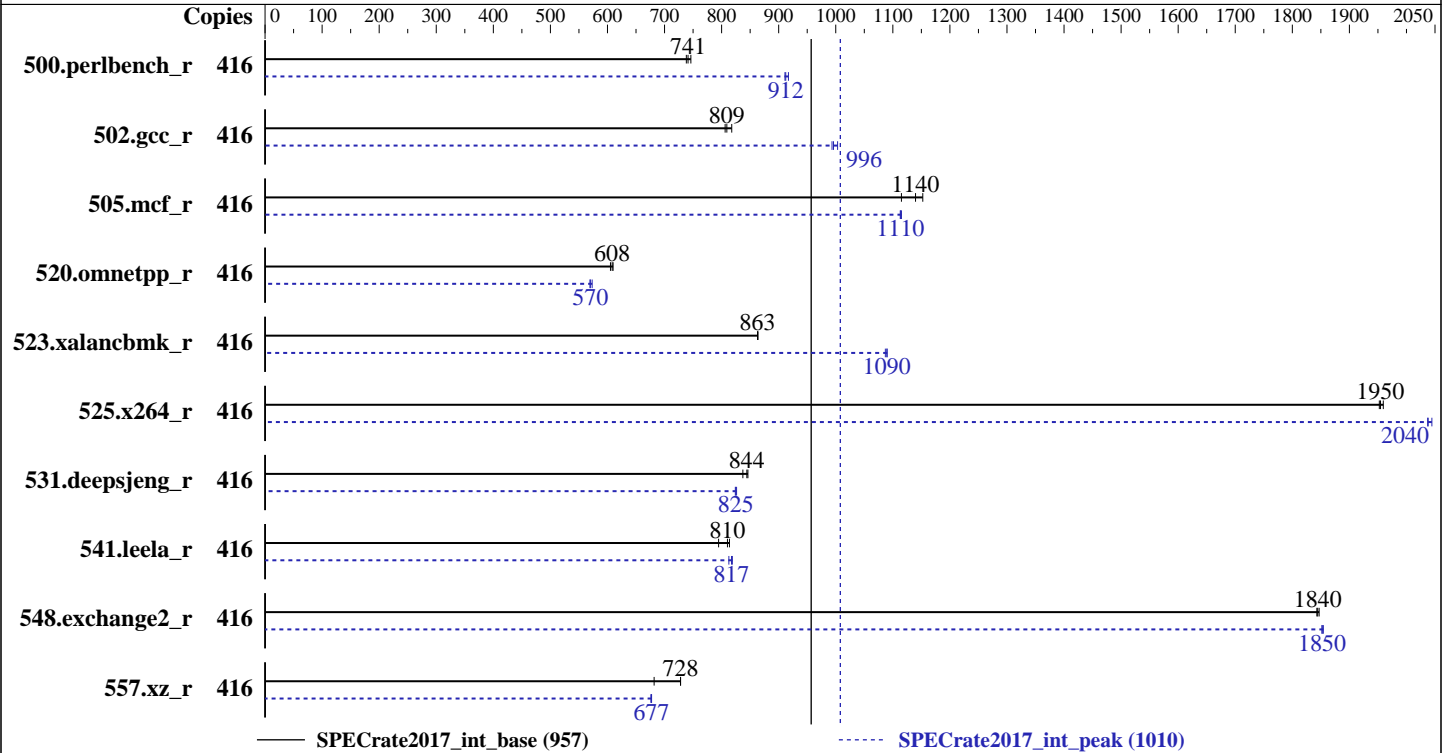
Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Dec-2017

Hardware Availability: Sep-2017

Software Availability: Sep-2017



Hardware

CPU Name: Intel Xeon Platinum 8164
 Max MHz.: 3700
 Nominal: 2000
 Enabled: 208 cores, 8 chips, 2 threads/core
 Orderable: 2,4,8 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: 3 TB (96 x 32 GB 2Rx4 PC4-2666V-R)
 Storage: 800 GB tmpfs
 Other: None

Software

OS: SUSE Linux Enterprise Server 12 SP2 (x86_64)
 Kernel 4.4.21-69-default
 Compiler: C/C++: Version 18.0.0.128 of Intel C/C++ Compiler for Linux;
 Fortran: Version 18.0.0.128 of Intel Fortran Compiler for Linux
 Parallel: No
 Firmware: Lenovo BIOS Version PSE105X 1.00 released Aug-2017
 File System: tmpfs
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other: jemalloc: jemalloc memory allocator library V5.0.1;
 jemalloc: configured and built at default for 32bit (i686) and 64bit (x86_64) targets;
 jemalloc: built with the RedHat Enterprise 7.4, and the system compiler gcc 4.8.5;
 jemalloc: sources available from jemalloc.net or releases



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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	416	897	738	888	746	894	741	416	722	917	727	911	726	912
502.gcc_r	416	731	806	728	809	720	818	416	587	1000	591	996	593	993
505.mcf_r	416	583	1150	590	1140	603	1120	416	604	1110	603	1120	604	1110
520.omnetpp_r	416	897	608	895	610	902	605	416	952	573	959	569	958	570
523.xalancbmk_r	416	509	864	509	863	509	863	416	403	1090	404	1090	403	1090
525.x264_r	416	373	1950	373	1950	372	1960	416	358	2040	356	2040	357	2040
531.deepsjeng_r	416	563	846	565	844	569	837	416	577	826	579	824	578	825
541.leela_r	416	850	810	847	814	867	795	416	843	817	841	819	848	813
548.exchange2_r	416	591	1840	591	1840	590	1850	416	588	1850	589	1850	588	1850
557.xz_r	416	617	728	617	728	659	682	416	663	677	664	677	665	676

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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"
Tmpfs filesystem can be set with:
mount -t tmpfs -o size=800g tmpfs /home
Process tuning setting:
echo 50000 > /proc/sys/kernel/sched_cfs_bandwidth_slice_us
echo 240000000 > /proc/sys/kernel/sched_latency_ns
echo 5000000 > /proc/sys/kernel/sched_migration_cost_ns
echo 100000000 > /proc/sys/kernel/sched_min_granularity_ns
echo 150000000 > /proc/sys/kernel/sched_wakeup_granularity_ns
```

General Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/cpu2017.1.0.2.ic18.0/lib/ia32:/home/cpu2017.1.0.2.ic18.0/lib/intel64"
LD_LIBRARY_PATH = "\$LD_LIBRARY_PATH:/home/cpu2017.1.0.2.ic18.0/je5.0.1-32:/home/cpu2017.1.0.2.ic18.0/je5.0.1-64"
Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM
memory using Redhat Enterprise Linux 7.4
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:

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General Notes (Continued)

```
sync; echo 3> /proc/sys/vm/drop_caches
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>
```

Platform Notes

BIOS configuration:
Choose Operating Mode set to Maximum Performance
SNC set to Enable
DCU Streamer Prefetcher set to Disable
MONITORMWAIT set to Enable
Execute Disable Bit set to Disable
Trusted Execution Technology set to Enable
Per Core Pstate set to Disable
XPT Prefetcher set to Enable
Stale AtoS set to Enable
LLC Deadline Alloc set to Enable
Sysinfo program /home/cpu2017.1.0.2.ic18.0/bin/sysinfo
Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f
running on linux-boxi Wed Dec 13 07:03:08 2017

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 8164 CPU @ 2.00GHz
 8 "physical id"s (chips)
416 "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 : 26
siblings : 52
physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 22 24 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 22 24 25 26 27 28
29
physical 2: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 22 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 22 24 25 26 27 28
29
physical 4: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 22 24 25 26 27 28
29
physical 5: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 22 24 25 26 27 28
29
physical 6: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 22 24 25 26 27 28
```

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Platform Notes (Continued)

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physical 7: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 22 24 25 26 27 28
29

From lscpu:

```

Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:             Little Endian
CPU(s):                 416
On-line CPU(s) list:   0-415
Thread(s) per core:    2
Core(s) per socket:    26
Socket(s):              8
NUMA node(s):          16
Vendor ID:              GenuineIntel
CPU family:             6
Model:                  85
Model name:             Intel(R) Xeon(R) Platinum 8164 CPU @ 2.00GHz
Stepping:               4
CPU MHz:                1995.328
BogoMIPS:               3990.65
Virtualization:         VT-x
L1d cache:              32K
L1i cache:              32K
L2 cache:               1024K
L3 cache:               36608K
NUMA node0 CPU(s):     0-3,7-9,13-15,20-22,208-211,215-217,221-223,228-230
NUMA node1 CPU(s):     4-6,10-12,16-19,23-25,212-214,218-220,224-227,231-233
NUMA node2 CPU(s):     26-29,33-35,39-41,46-48,234-237,241-243,247-249,254-256
NUMA node3 CPU(s):     30-32,36-38,42-45,49-51,238-240,244-246,250-253,257-259
NUMA node4 CPU(s):     52-55,59-61,65-67,72-74,260-263,267-269,273-275,280-282
NUMA node5 CPU(s):     56-58,62-64,68-71,75-77,264-266,270-272,276-279,283-285
NUMA node6 CPU(s):     78-81,85-87,91-93,98-100,286-289,293-295,299-301,306-308
NUMA node7 CPU(s):     82-84,88-90,94-97,101-103,290-292,296-298,302-305,309-311
NUMA node8 CPU(s):     104-107,111-113,117-119,124-126,312-315,319-321,325-327,332-334
NUMA node9 CPU(s):     108-110,114-116,120-123,127-129,316-318,322-324,328-331,335-337
NUMA node10 CPU(s):    130-133,137-139,143-145,150-152,338-341,345-347,351-353,358-360
NUMA node11 CPU(s):    134-136,140-142,146-149,153-155,342-344,348-350,354-357,361-363
NUMA node12 CPU(s):    156-159,163-165,169-171,176-178,364-367,371-373,377-379,384-386
NUMA node13 CPU(s):    160-162,166-168,172-175,179-181,368-370,374-376,380-383,387-389
NUMA node14 CPU(s):

```

(Continued on next page)



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Platform Notes (Continued)

182-185,189-191,195-197,202-204,390-393,397-399,403-405,410-412

NUMA node15 CPU(s):

186-188,192-194,198-201,205-207,394-396,400-402,406-409,413-415

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
aperfmpperf eagerfpu pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 sse3 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 ida arat epb pln pts dtherm intel_pt
tpr_shadow vmi flexpriority ept vpid fsgsbase tsc_adjust bml hle avx2 smep bmi2
erms invpcid rtm cqm mpx avx512f avx512dq rdseed adx smap clflushopt clwb avx512cd
avx512bw avx512vl xsaveopt xsavec xgetbv1 cqm_llc cqm_occup_llc

```
/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 20 21 22 208 209 210 211 215 216 217 221 222 223
228 229 230

node 0 size: 192984 MB

node 0 free: 192421 MB

node 1 cpus: 4 5 6 10 11 12 16 17 18 19 23 24 25 212 213 214 218 219 220 224 225 226
227 231 232 233

node 1 size: 193528 MB

node 1 free: 192960 MB

node 2 cpus: 26 27 28 29 33 34 35 39 40 41 46 47 48 234 235 236 237 241 242 243 247 248
249 254 255 256

node 2 size: 193528 MB

node 2 free: 184464 MB

node 3 cpus: 30 31 32 36 37 38 42 43 44 45 49 50 51 238 239 240 244 245 246 250 251 252
253 257 258 259

node 3 size: 193528 MB

node 3 free: 188045 MB

node 4 cpus: 52 53 54 55 59 60 61 65 66 67 72 73 74 260 261 262 263 267 268 269 273 274
275 280 281 282

node 4 size: 193528 MB

node 4 free: 193015 MB

node 5 cpus: 56 57 58 62 63 64 68 69 70 71 75 76 77 264 265 266 270 271 272 276 277 278
279 283 284 285

node 5 size: 193528 MB

node 5 free: 193039 MB

node 6 cpus: 78 79 80 81 85 86 87 91 92 93 98 99 100 286 287 288 289 293 294 295 299
300 301 306 307 308

node 6 size: 193528 MB

node 6 free: 193034 MB

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Platform Notes (Continued)

```

node 7 cpus: 82 83 84 88 89 90 94 95 96 97 101 102 103 290 291 292 296 297 298 302 303
304 305 309 310 311
node 7 size: 193528 MB
node 7 free: 193035 MB
node 8 cpus: 104 105 106 107 111 112 113 117 118 119 124 125 126 312 313 314 315 319
320 321 325 326 327 332 333 334
node 8 size: 193528 MB
node 8 free: 193042 MB
node 9 cpus: 108 109 110 114 115 116 120 121 122 123 127 128 129 316 317 318 322 323
324 328 329 330 331 335 336 337
node 9 size: 193528 MB
node 9 free: 192997 MB
node 10 cpus: 130 131 132 133 137 138 139 143 144 145 150 151 152 338 339 340 341 345
346 347 351 352 353 358 359 360
node 10 size: 193528 MB
node 10 free: 193033 MB
node 11 cpus: 134 135 136 140 141 142 146 147 148 149 153 154 155 342 343 344 348 349
350 354 355 356 357 361 362 363
node 11 size: 193528 MB
node 11 free: 193028 MB
node 12 cpus: 156 157 158 159 163 164 165 169 170 171 176 177 178 364 365 366 367 371
372 373 377 378 379 384 385 386
node 12 size: 193528 MB
node 12 free: 192841 MB
node 13 cpus: 160 161 162 166 167 168 172 173 174 175 179 180 181 368 369 370 374 375
376 380 381 382 383 387 388 389
node 13 size: 193528 MB
node 13 free: 193041 MB
node 14 cpus: 182 183 184 185 189 190 191 195 196 197 202 203 204 390 391 392 393 397
398 399 403 404 405 410 411 412
node 14 size: 193528 MB
node 14 free: 193026 MB
node 15 cpus: 186 187 188 192 193 194 198 199 200 201 205 206 207 394 395 396 400 401
402 406 407 408 409 413 414 415
node 15 size: 193523 MB
node 15 free: 192978 MB
node distances:
node  0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15
  0:  10  20  20  20  20  20  20  20  20  20  20  20  20  20  20  20
  1:  20  10  20  20  20  20  20  20  20  20  20  20  20  20  20  20
  2:  20  20  10  20  20  20  20  20  20  20  20  20  20  20  20  20
  3:  20  20  20  10  20  20  20  20  20  20  20  20  20  20  20  20
  4:  20  20  20  20  10  20  20  20  20  20  20  20  20  20  20  20
  5:  20  20  20  20  20  10  20  20  20  20  20  20  20  20  20  20
  6:  20  20  20  20  20  20  10  20  20  20  20  20  20  20  20  20
  7:  20  20  20  20  20  20  20  10  20  20  20  20  20  20  20  20
  8:  20  20  20  20  20  20  20  20  10  20  20  20  20  20  20  20

```

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Platform Notes (Continued)

9:	20	20	20	20	20	20	20	20	20	10	20	20	20	20	20	20
10:	20	20	20	20	20	20	20	20	20	20	10	20	20	20	20	20
11:	20	20	20	20	20	20	20	20	20	20	20	10	20	20	20	20
12:	20	20	20	20	20	20	20	20	20	20	20	20	10	20	20	20
13:	20	20	20	20	20	20	20	20	20	20	20	20	20	10	20	20
14:	20	20	20	20	20	20	20	20	20	20	20	20	20	20	10	20
15:	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	10

From /proc/meminfo

```
MemTotal:      3170207908 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

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

```
SuSE-release:
  SUSE Linux Enterprise Server 12 (x86_64)
  VERSION = 12
  PATCHLEVEL = 2
  # 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-SP2"
  VERSION_ID="12.2"
  PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
  ID="sles"
  ANSI_COLOR="0;32"
  CPE_NAME="cpe:/o:suse:sles:12:sp2"
```

uname -a:

```
Linux linux-boxi 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016 (9464f67)
x86_64 x86_64 x86_64 GNU/Linux
```

run-level 3 Dec 13 06:24

SPEC is set to: /home/cpu2017.1.0.2.ic18.0

```
Filesystem      Type      Size  Used Avail Use% Mounted on
tmpfs            tmpfs     800G   11G  790G   2% /home
```

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.

```
BIOS Lenovo -[PSE105X-1.00]- 08/17/2017
Memory:
  96x Samsung M393A4K40BB2-CTD 32 GB 2 rank 2666
```

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Platform Notes (Continued)

(End of data from sysinfo program)

Compiler Version Notes

```
=====
CC 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
   525.x264_r(base, peak) 557.xz_r(base, peak)
-----
```

```
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
-----
```

```
=====
CC 500.perlbench_r(peak) 502.gcc_r(peak)
-----
```

```
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
-----
```

```
=====
CXXC 520.omnetpp_r(base) 523.xalanbmk_r(base) 531.deepsjeng_r(base)
     541.leela_r(base)
-----
```

```
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
-----
```

```
=====
CXXC 520.omnetpp_r(peak) 523.xalanbmk_r(peak) 531.deepsjeng_r(peak)
     541.leela_r(peak)
-----
```

```
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
-----
```

```
=====
FC 548.exchange2_r(base, peak)
-----
```

```
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
-----
```




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Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

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=3 -L/usr/local/je5.0.1-64/lib -ljemalloc
```

C++ benchmarks:

```
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=3 -L/usr/local/je5.0.1-64/lib -ljemalloc
```

Fortran benchmarks:

```
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte
-L/usr/local/je5.0.1-64/lib -ljemalloc
```



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Base Other Flags

C benchmarks:

-m64 -std=c11

C++ benchmarks:

-m64

Fortran benchmarks:

-m64

Peak Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

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
```

Peak Optimization Flags

C benchmarks:

```
500.perlbench_r: -w1, -z, muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo
-xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=3
-fno-strict-overflow -L/usr/local/je5.0.1-64/lib
```

(Continued on next page)



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Peak Optimization Flags (Continued)

500.perlbench_r (continued):

-ljemalloc

502.gcc_r: -L/opt/intel/compilers_and_libraries_2018/linux/lib/ia32

-Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo

-xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=3

-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=3 -L/usr/local/je5.0.1-64/lib

-ljemalloc

525.x264_r: -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div

-qopt-mem-layout-trans=3 -fno-alias

-L/usr/local/je5.0.1-64/lib -ljemalloc

557.xz_r: Same as 505.mcf_r

C++ benchmarks:

520.omnetpp_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo

-xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=3

-L/usr/local/je5.0.1-64/lib -ljemalloc

523.xalancbmk_r: -L/opt/intel/compilers_and_libraries_2018/linux/lib/ia32

-Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo

-xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=3

-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=3 -nostandard-realloc-lhs -align array32byte

-L/usr/local/je5.0.1-64/lib -ljemalloc

Peak Other Flags

C benchmarks (except as noted below):

-m64 -std=c11

(Continued on next page)



SPEC CPU2017 Integer Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Lenovo Global Technology

ThinkSystem SR950
(2.00 GHz, Intel Xeon Platinum 8164)

SPECrate2017_int_base = 957

SPECrate2017_int_peak = 1010

CPU2017 License: 9017

Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Dec-2017

Hardware Availability: Sep-2017

Software Availability: Sep-2017

Peak Other Flags (Continued)

502.gcc_r: -m32 -std=c11

C++ benchmarks (except as noted below):

-m64

523.xalancbmk_r: -m32

Fortran benchmarks:

-m64

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

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.html>

<http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-SKL-A.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.xml>

<http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-SKL-A.xml>

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