SPEC® CPU2017 Integer Rate Result

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Lenovo Global Technology

ThinkSystem SR950
(2.50 GHz, Intel Xeon Platinum 8180M)

SPECrate2017_int_base = 1130

SPECrate2017_int_peak = 1190

CPU2017 License: 9017
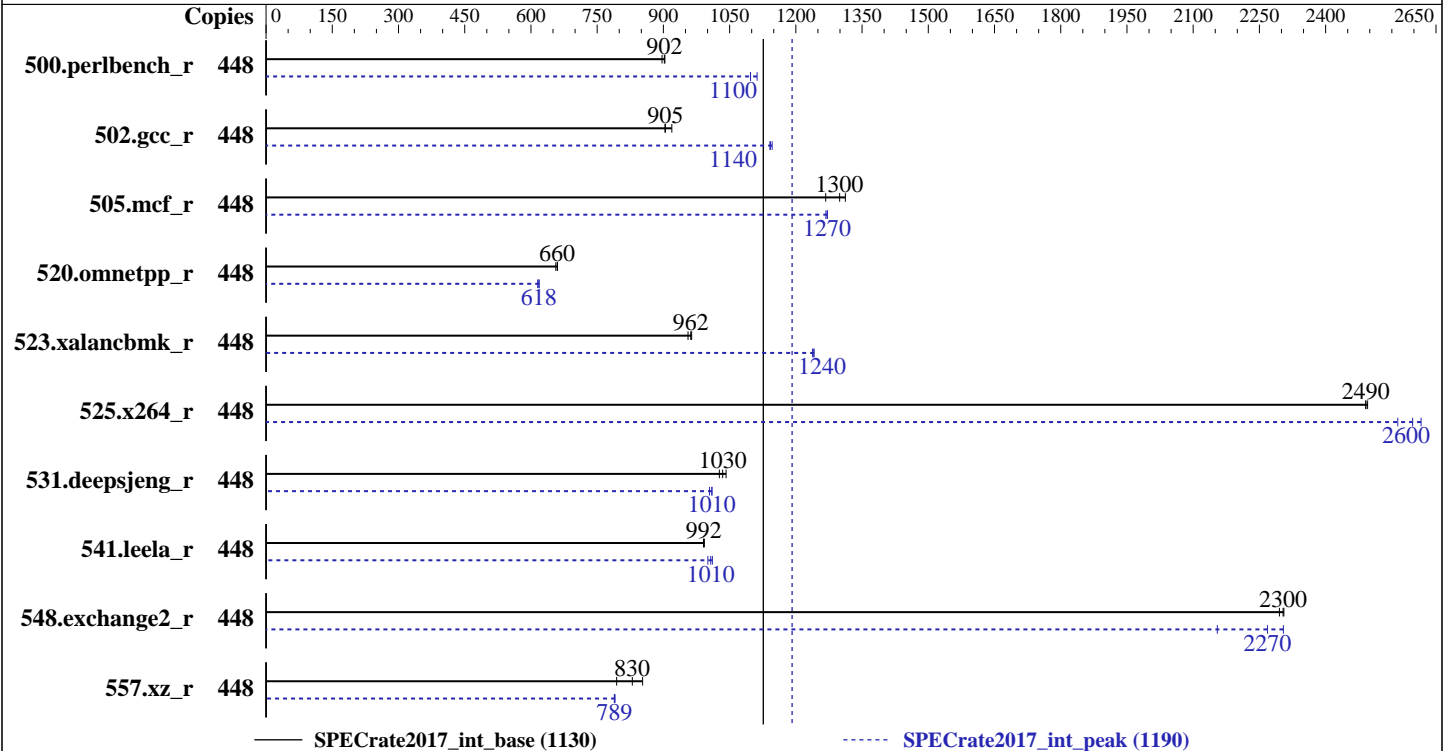
Test Sponsor: Lenovo Global Technology

Tested by: Lenovo Global Technology

Test Date: Nov-2017

Hardware Availability: Sep-2017

Software Availability: Sep-2017

Copies

Benchmark	Copies	base	peak
500.perlbench_r	448	902	1100
502.gcc_r	448	905	1140
505.mcf_r	448	1300	1270
520.omnetpp_r	448	660	618
523.xalancbmk_r	448	962	1240
525.x264_r	448	2490	2600
531.deepsjeng_r	448	1030	1010
541.leela_r	448	992	1010
548.exchange2_r	448	2300	2270
557.xz_r	448	830	789

SPECrate2017_int_base (1130)   SPECrate2017_int_peak (1190)

Hardware

CPU Name: Intel Xeon Platinum 8180M

  Max MHz.:   3800

  Nominal: 2500

Enabled: 224 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:   38.5 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 avilable 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	448	795	897	**791**	**902**	789	903	448	641	1110	**650**	**1100**	650	1100
502.gcc_r	448	**701**	**905**	702	904	690	919	448	553	1150	**555**	**1140**	556	1140
505.mcf_r	448	552	1310	**557**	**1300**	571	1270	448	**570**	**1270**	569	1270	571	1270
520.omnetpp_r	448	**891**	**660**	890	660	896	656	448	950	619	956	615	**951**	**618**
523.xalancbmk_r	448	491	964	495	956	**492**	**962**	448	**382**	**1240**	381	1240	382	1240
525.x264_r	448	314	2500	315	2490	**315**	**2490**	448	300	2620	**302**	**2600**	306	2560
531.deepsjeng_r	448	**496**	**1030**	493	1040	500	1030	448	508	1010	**509**	**1010**	511	1000
541.leela_r	448	747	993	749	991	**748**	**992**	448	734	1010	741	1000	**737**	**1010**
548.exchange2_r	448	509	2310	**510**	**2300**	511	2300	448	509	2300	545	2150	**517**	**2270**
557.xz_r	448	567	853	**583**	**830**	609	794	448	612	791	613	789	**613**	**789**
SPECrate2017_int_base =		**1130**												
SPECrate2017_int_peak =		**1190**												

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:
```

(Continued on next page)

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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 Thu Nov 16 22:24:56 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 8180M CPU @ 2.50GHz
       8  "physical id"s (chips)
       448 "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 : 28
       siblings  : 56
       physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24 25 26 27
       28 29 30
       physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24 25 26 27
       28 29 30
       physical 2: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24 25 26 27
       28 29 30
       physical 3: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24 25 26 27
       28 29 30
       physical 4: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24 25 26 27
       28 29 30
       physical 5: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24 25 26 27
       28 29 30
       physical 6: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24 25 26 27
```

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Platform Notes (Continued)

```
     28 29 30
    physical 7: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24 25 26 27
     28 29 30

 From lscpu:
    Architecture:          x86_64
    CPU op-mode(s):        32-bit, 64-bit
    Byte Order:            Little Endian
    CPU(s):                448
    On-line CPU(s) list:   0-447
    Thread(s) per core:    2
    Core(s) per socket:    28
    Socket(s):             8
    NUMA node(s):          16
    Vendor ID:             GenuineIntel
    CPU family:            6
    Model:                 85
    Model name:            Intel(R) Xeon(R) Platinum 8180M CPU @ 2.50GHz
    Stepping:              4
    CPU MHz:               2494.153
    BogoMIPS:              4988.30
    Virtualization:        VT-x
    L1d cache:             32K
    L1i cache:             32K
    L2 cache:              1024K
    L3 cache:              39424K
    NUMA node0 CPU(s):     0-3,7-9,14-17,21-23,224-227,231-233,238-241,245-247
    NUMA node1 CPU(s):     4-6,10-13,18-20,24-27,228-230,234-237,242-244,248-251
    NUMA node2 CPU(s):     28-31,35-37,42-45,49-51,252-255,259-261,266-269,273-275
    NUMA node3 CPU(s):     32-34,38-41,46-48,52-55,256-258,262-265,270-272,276-279
    NUMA node4 CPU(s):     56-59,63-65,70-73,77-79,280-283,287-289,294-297,301-303
    NUMA node5 CPU(s):     60-62,66-69,74-76,80-83,284-286,290-293,298-300,304-307
    NUMA node6 CPU(s):     84-87,91-93,98-101,105-107,308-311,315-317,322-325,329-331
    NUMA node7 CPU(s):     88-90,94-97,102-104,108-111,312-314,318-321,326-328,332-335
    NUMA node8 CPU(s):
    112-115,119-121,126-129,133-135,336-339,343-345,350-353,357-359
    NUMA node9 CPU(s):
    116-118,122-125,130-132,136-139,340-342,346-349,354-356,360-363
    NUMA node10 CPU(s):
    140-143,147-149,154-157,161-163,364-367,371-373,378-381,385-387
    NUMA node11 CPU(s):
    144-146,150-153,158-160,164-167,368-370,374-377,382-384,388-391
    NUMA node12 CPU(s):
    168-171,175-177,182-185,189-191,392-395,399-401,406-409,413-415
    NUMA node13 CPU(s):
    172-174,178-181,186-188,192-195,396-398,402-405,410-412,416-419
    NUMA node14 CPU(s):
```

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Platform Notes (Continued)

```
     196-199,203-205,210-213,217-219,420-423,427-429,434-437,441-443
     NUMA node15 CPU(s):
     200-202,206-209,214-216,220-223,424-426,430-433,438-440,444-447
     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
     aperfmperf eagerfpu 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 ida arat epb pln pts dtherm intel_pt
     tpr_shadow vnmi flexpriority ept vpid fsgsbase tsc_adjust bmi1 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 : 39424 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 14 15 16 17 21 22 23 224 225 226 227 231 232 233 238 239 240
     241 245 246 247
     node 0 size: 192984 MB
     node 0 free: 192408 MB
     node 1 cpus: 4 5 6 10 11 12 13 18 19 20 24 25 26 27 228 229 230 234 235 236 237 242 243
     244 248 249 250 251
     node 1 size: 193528 MB
     node 1 free: 192965 MB
     node 2 cpus: 28 29 30 31 35 36 37 42 43 44 45 49 50 51 252 253 254 255 259 260 261 266
     267 268 269 273 274 275
     node 2 size: 193528 MB
     node 2 free: 184525 MB
     node 3 cpus: 32 33 34 38 39 40 41 46 47 48 52 53 54 55 256 257 258 262 263 264 265 270
     271 272 276 277 278 279
     node 3 size: 193528 MB
     node 3 free: 193001 MB
     node 4 cpus: 56 57 58 59 63 64 65 70 71 72 73 77 78 79 280 281 282 283 287 288 289 294
     295 296 297 301 302 303
     node 4 size: 193528 MB
     node 4 free: 188024 MB
     node 5 cpus: 60 61 62 66 67 68 69 74 75 76 80 81 82 83 284 285 286 290 291 292 293 298
     299 300 304 305 306 307
     node 5 size: 193528 MB
     node 5 free: 193007 MB
     node 6 cpus: 84 85 86 87 91 92 93 98 99 100 101 105 106 107 308 309 310 311 315 316 317
     322 323 324 325 329 330 331
     node 6 size: 193528 MB
     node 6 free: 193017 MB
```

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Software Availability: Sep-2017

Platform Notes (Continued)

```
node 7 cpus: 88 89 90 94 95 96 97 102 103 104 108 109 110 111 312 313 314 318 319 320
321 326 327 328 332 333 334 335
node 7 size: 193528 MB
node 7 free: 192982 MB
node 8 cpus: 112 113 114 115 119 120 121 126 127 128 129 133 134 135 336 337 338 339
343 344 345 350 351 352 353 357 358 359
node 8 size: 193528 MB
node 8 free: 193015 MB
node 9 cpus: 116 117 118 122 123 124 125 130 131 132 136 137 138 139 340 341 342 346
347 348 349 354 355 356 360 361 362 363
node 9 size: 193528 MB
node 9 free: 192998 MB
node 10 cpus: 140 141 142 143 147 148 149 154 155 156 157 161 162 163 364 365 366 367
371 372 373 378 379 380 381 385 386 387
node 10 size: 193528 MB
node 10 free: 193024 MB
node 11 cpus: 144 145 146 150 151 152 153 158 159 160 164 165 166 167 368 369 370 374
375 376 377 382 383 384 388 389 390 391
node 11 size: 193528 MB
node 11 free: 193012 MB
node 12 cpus: 168 169 170 171 175 176 177 182 183 184 185 189 190 191 392 393 394 395
399 400 401 406 407 408 409 413 414 415
node 12 size: 193528 MB
node 12 free: 192908 MB
node 13 cpus: 172 173 174 178 179 180 181 186 187 188 192 193 194 195 396 397 398 402
403 404 405 410 411 412 416 417 418 419
node 13 size: 193528 MB
node 13 free: 192929 MB
node 14 cpus: 196 197 198 199 203 204 205 210 211 212 213 217 218 219 420 421 422 423
427 428 429 434 435 436 437 441 442 443
node 14 size: 193528 MB
node 14 free: 193021 MB
node 15 cpus: 200 201 202 206 207 208 209 214 215 216 220 221 222 223 424 425 426 430
431 432 433 438 439 440 444 445 446 447
node 15 size: 193523 MB
node 15 free: 192745 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 Nov 16 22:18

 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.xalancbmk_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.xalancbmk_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: `-Wl,-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)

Standard Performance Evaluation Corporation (info@spec.org)   https://www.spec.org/

Lenovo Global Technology

ThinkSystem SR950
(2.50 GHz, Intel Xeon Platinum 8180M)

SPECrate2017_int_base = 1130

SPECrate2017_int_peak = 1190

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`

Lenovo Global Technology

ThinkSystem SR950
(2.50 GHz, Intel Xeon Platinum 8180M)

SPECrate2017_int_base =   1130

SPECrate2017_int_peak =   1190

CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

Test Date: Nov-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-Flags-V1.2-SKL-E.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-Flags-V1.2-SKL-E.xml

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

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