**SPEC CPU®2017 Integer Rate Result**

**Inspur Corporation**

Inspur NF5180M6 (Intel Xeon Gold 6330N)

| Copies | 0 | 40.0 | 80.0 | 120 | 160 | 200 | 240 | 280 | 320 | 360 | 400 | 440 | 480 | 520 | 560 | 600 | 640 | 680 | 720 | 760 | 800 | 840 | 880 | 920 | 960 | 1000 |
|--------|---|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 500.perlbench_r | 112 |       |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 502.gcc_r | 112 |       |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 505.mcf_r | 112 |       |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 520.omnetpp_r | 112 |       |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 523.xalancbmk_r | 112 |       |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 525.x264_r | 112 |       |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 531.deepsjeng_r | 112 |       |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 541.leela_r | 112 |       |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 548.exchange2_r | 112 |       |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 557.xz_r | 112 |       |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

SPECrate®2017_int_base = 358

SPECrate®2017_int_peak = 372

**Hardware**

- **CPU Name:** Intel Xeon Gold 6330N
- **Max MHz:** 3400
- **Nominal:** 2200
- **Enabled:** 56 cores, 2 chips, 2 threads/core
- **Orderable:** 1.2 chips
- **Cache L1:** 32 KB I + 48 KB D on chip per core
- **Cache L2:** 1.25 MB I+D on chip per core
- **Cache L3:** 42 MB I+D on chip per chip
- **Other:** None
- **Memory:** 1 TB (32 x 32 GB 2Rx4 PC4-3200AA-R, running at 2666)
- **Storage:** 1 x 4 TB NVME SSD
- **Other:** None

**Software**

- **OS:** Red Hat Enterprise Linux release 8.2 (Ootpa) 4.18.0-193.el8.x86_64
- **Compiler:** C/C++: Version 2021.1 of Intel oneAPI DPC++/C++ Compiler Build 20201113 for Linux;
  Fortran: Version 2021.1 of Intel Fortran Compiler Classic Build 20201112 for Linux;
  C/C++: Version 2021.1 of Intel C/C++ Compiler Classic Build 20201112 for Linux
- **Parallel:** No
- **Firmware:** Version 05.00.00 released Apr-2021
- **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.
Insper Corporation

Inspur NF5180M6 (Intel Xeon Gold 6330N)

**SPEC CPU®2017 Integer Rate Result**

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

---

## Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>112</td>
<td>718</td>
<td>248</td>
<td>717</td>
<td>249</td>
<td>718</td>
<td>248</td>
<td>112</td>
<td>610</td>
<td>292</td>
<td>611</td>
<td>292</td>
<td>610</td>
<td>292</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>112</td>
<td>554</td>
<td>286</td>
<td>556</td>
<td>285</td>
<td><strong>554</strong></td>
<td><strong>286</strong></td>
<td>112</td>
<td>459</td>
<td>345</td>
<td><strong>460</strong></td>
<td><strong>345</strong></td>
<td>463</td>
<td>343</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>112</td>
<td><strong>300</strong></td>
<td>604</td>
<td>301</td>
<td>601</td>
<td>299</td>
<td>604</td>
<td>112</td>
<td><strong>300</strong></td>
<td>604</td>
<td>301</td>
<td>601</td>
<td>299</td>
<td>604</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>112</td>
<td>676</td>
<td>217</td>
<td><strong>676</strong></td>
<td><strong>217</strong></td>
<td>673</td>
<td>218</td>
<td>112</td>
<td>676</td>
<td>217</td>
<td><strong>676</strong></td>
<td><strong>217</strong></td>
<td>673</td>
<td>218</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>112</td>
<td>262</td>
<td>451</td>
<td>263</td>
<td>450</td>
<td><strong>262</strong></td>
<td><strong>451</strong></td>
<td>112</td>
<td>262</td>
<td>451</td>
<td>263</td>
<td>450</td>
<td>262</td>
<td>451</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>112</td>
<td>261</td>
<td>752</td>
<td>261</td>
<td>751</td>
<td><strong>261</strong></td>
<td><strong>752</strong></td>
<td>112</td>
<td>249</td>
<td>789</td>
<td>249</td>
<td>789</td>
<td>249</td>
<td>789</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>112</td>
<td><strong>471</strong></td>
<td>273</td>
<td>471</td>
<td>273</td>
<td>471</td>
<td>273</td>
<td>112</td>
<td><strong>471</strong></td>
<td>273</td>
<td>471</td>
<td>273</td>
<td>471</td>
<td>273</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>112</td>
<td>696</td>
<td>266</td>
<td>696</td>
<td>266</td>
<td>697</td>
<td>266</td>
<td>112</td>
<td><strong>696</strong></td>
<td><strong>266</strong></td>
<td>696</td>
<td>266</td>
<td>697</td>
<td>266</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>112</td>
<td>400</td>
<td>734</td>
<td>400</td>
<td>734</td>
<td>400</td>
<td>734</td>
<td>112</td>
<td><strong>400</strong></td>
<td><strong>734</strong></td>
<td>400</td>
<td>734</td>
<td>400</td>
<td>734</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>112</td>
<td>586</td>
<td>206</td>
<td>588</td>
<td>206</td>
<td>585</td>
<td>207</td>
<td>112</td>
<td>602</td>
<td>201</td>
<td>599</td>
<td>202</td>
<td><strong>602</strong></td>
<td><strong>202</strong></td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 358**  
**SPECrate®2017_int_peak = 372**

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"  
SCALING_GOVERNOR set to Performance

### Environment Variables Notes

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

```bash
LD_LIBRARY_PATH = 
  
  "'/home/CPU2017/lib/intel64:/home/CPU2017/lib/ia32:/home/CPU2017/je5.0.1-32"

MALLOC_CONF = "retain:true"
```

### General Notes

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM  
Memory using Red Hat Enterprise Linux 8.1  
Transparent Huge Pages enabled by default  
Prior to runcpu invocation  
Filesystem page cache synced and cleared with:

(Continued on next page)
SPEC CPU®2017 Integer Rate Result

Inspur Corporation
Inspur NF5180M6 (Intel Xeon Gold 6330N)

**SPECrate®2017_int_base = 358**

**SPECrate®2017_int_peak = 372**

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>3358</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>Inspur Corporation</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Inspur Corporation</td>
</tr>
<tr>
<td>Test Date:</td>
<td>Jul-2021</td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>May-2021</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Dec-2020</td>
</tr>
</tbody>
</table>

General Notes (Continued)

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

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.


Platform Notes

BIOS configuration:
ENERGY_PERF_BIAS_CFG mode set to Performance
Hardware Prefetch set to Disable
VT Support set to Disable
C1E Support set to Disable
Sub NUMA Cluster (SNC) set to Enable
Intel Hyper Threading Technology set to Enable

Sysinfo program /home/CPU2017/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acafc64d
running on localhost.localdomain Sat Jul  3 13:04:59 2021

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) Gold 6330N CPU @ 2.20GHz
2 "physical id"s (chips)
112 "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 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
25 26 27
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
```

(Continued on next page)
Platform Notes (Continued)

From lscpu from util-linux 2.32.1:

- Architecture: x86_64
- CPU op-mode(s): 32-bit, 64-bit
- Byte Order: Little Endian
- CPU(s): 112
- On-line CPU(s) list: 0-111
- Thread(s) per core: 2
- Core(s) per socket: 28
- Socket(s): 2
- NUMA node(s): 4
- Vendor ID: GenuineIntel
- CPU family: 6
- Model: 106
- Model name: Intel(R) Xeon(R) Gold 6330N CPU @ 2.20GHz
- Stepping: 6
- CPU MHz: 2600.000
- CPU max MHz: 3400.0000
- CPU min MHz: 800.0000
- BogoMIPS: 4400.00
- Virtualization: VT-x
- L1d cache: 48K
- L1i cache: 32K
- L2 cache: 1280K
- L3 cache: 43008K
- NUMA node0 CPU(s): 0-13, 56-69
- NUMA node1 CPU(s): 14-27, 70-83
- NUMA node2 CPU(s): 28-41, 84-97
- NUMA node3 CPU(s): 42-55, 98-111
- 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 pdgcelgb rdtscl
  pm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc cpuid
  aperfmerpf pni pclmulqdq dtes64 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 invpcid_single ssbd mba ibrs
  ibpb stibp ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid fsgsbase tsc_adjust
  bmi1 hle avx2 smep bmi2 ersed enpcid rtm cm cm shuts_a avx512f avx512dq rseed adx smap
  avx512ifma clflushopt clwb intel_pt avx512cd sha ni avx512bw avx512vl xsaveopt
  xsavec xgetbv1 xsave cqm_lmc cqm_occup_llc cqm_mbb_total cqm_mbb local wbinvd
  dtherm ida arat pln pts avx512vzbmi umip pku ospke avx512vbmi qdfni vaes vpcmldq avx
  avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdpid md_clear pconfig flush_l1d
  arch_capabilities

/cache data
- cache size : 43008 KB
## SPEC CPU®2017 Integer Rate Result

**Inspur Corporation**  
**Inspur NF5180M6 (Intel Xeon Gold 6330N)**

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>3358</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>Inspur Corporation</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Inspur Corporation</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 358**  
**SPECrate®2017_int_peak = 372**

<table>
<thead>
<tr>
<th>Test Date:</th>
<th>Jul-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware Availability:</td>
<td>May-2021</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Dec-2020</td>
</tr>
</tbody>
</table>

### Platform Notes (Continued)

From `numactl --hardware`  
**WARNING:** a `numactl` 'node' might or might not correspond to a physical chip.  
**available:** 4 nodes (0-3)  
- node 0 cpus: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 56 57 58 59 60 61 62 63 64 65 66 67 68 69  
- node 0 size: 257636 MB  
- node 0 free: 250318 MB  
- node 1 cpus: 14 15 16 17 18 19 20 21 22 23 24 25 26 27 70 71 72 73 74 75 76 77 78 79 80 81 82 83  
- node 1 size: 258014 MB  
- node 1 free: 252549 MB  
- node 2 cpus: 28 29 30 31 32 33 34 35 36 37 38 39 40 41 84 85 86 87 88 89 90 91 92 93 94 95 96 97  
- node 2 size: 258041 MB  
- node 2 free: 252605 MB  
- node 3 cpus: 42 43 44 45 46 47 48 49 50 51 52 53 54 55 98 99 100 101 102 103 104 105 106 107 108 109 110 111  
- node 3 size: 258039 MB  
- node 3 free: 252601 MB  
- node distances:  
  - node 0: 10 11 20 20  
  - node 1: 11 10 20 20  
  - node 2: 20 20 10 11  
  - node 3: 20 20 11 10

From `/proc/meminfo`  
- MemTotal: 1056493388 kB  
- HugePages_Total: 0  
- Hugepagesize: 2048 kB

/sbin/tuned-adm active  
- It seems that tuned daemon is not running, preset profile is not activated.  
- Preset profile: throughput-performance

/sys/devices/system/cpu/cpu*/cpufreq/scaling_governor has performance

From `/etc/*release* /etc/*version*`  
- os-release:  
  - NAME="Red Hat Enterprise Linux"  
  - VERSION="8.2 (Ootpa)"  
  - ID="rhel"  
  - ID_LIKE="fedora"  
  - VERSION_ID="8.2"  
  - PLATFORM_ID="platform:el8"  
  - PRETTY_NAME="Red Hat Enterprise Linux 8.2 (Ootpa)"  
  - ANSI_COLOR="0;31"

(Continued on next page)
Inspur Corporation

Inspur NF5180M6 (Intel Xeon Gold 6330N)

SPECrate®2017_int_base = 358
SPECrate®2017_int_peak = 372

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

Test Date: Jul-2021
Hardware Availability: May-2021
Software Availability: Dec-2020

Platform Notes (Continued)

redhat-release: Red Hat Enterprise Linux release 8.2 (Ootpa)
system-release: Red Hat Enterprise Linux release 8.2 (Ootpa)
system-release-cpe: cpe:/o:redhat:enterprise_linux:8.2:ga

uname -a:
    Linux localhost.localdomain 4.18.0-193.el8.x86_64 #1 SMP Fri Mar 27 14:35:58 UTC 2020
    x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-12207 (iTLB Multihit): Not affected
CVE-2018-3620 (L1 Terminal Fault): Not affected
Microarchitectural Data Sampling: Not affected
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: usercopy/swapgs barriers and __user pointer sanitation
CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling
CVE-2020-0543 (Special Register Buffer Data Sampling): No status reported
CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 3 Jul 3 11:17

SPEC is set to: /home/CPU2017

Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs 3.6T 97G 3.5T 3% /home

From /sys/devices/virtual/dmi/id
Vendor: Inspur
Product: NF5180M6
Product Family: Family
Serial: 380827124

Additional information from dmidecode 3.2 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:
    32x Micron 36ASF4G72PZ-3G2R1 32 GB 2 rank 3200, configured at 2666

BIOS:
    BIOS Vendor: American Megatrends Inc.
    BIOS Version: 05.00.00

(Continued on next page)
## SPEC CPU®2017 Integer Rate Result

**Inspur Corporation**

**Inspur NF5180M6 (Intel Xeon Gold 6330N)**

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>3358</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>Inspur Corporation</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Inspur Corporation</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 358**

**SPECrate®2017_int_peak = 372**

---

### Platform Notes (Continued)

- **BIOS Date:** 04/25/2021
- **BIOS Revision:** 5.22

(End of data from sysinfo program)

### Compiler Version Notes

```plaintext
-------------- | 500.perlbench_r(peak) 557.xz_r(peak)
--------------
Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R)
64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

-------------- | 502.gcc_r(peak)
--------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version
2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

-------------- | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
| 525.x264_r(base, peak) 557.xz_r(base)
--------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

-------------- | 500.perlbench_r(peak) 557.xz_r(peak)
--------------
Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R)
64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

-------------- | 502.gcc_r(peak)
--------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version
2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
```

(Continued on next page)
## SPEC CPU®2017 Integer Rate Result

### Inspur Corporation

**Inspur NF5180M6 (Intel Xeon Gold 6330N)**

<table>
<thead>
<tr>
<th>CPU2017 License</th>
<th>Test Date</th>
<th>Test Sponsor</th>
<th>Hardware Availability</th>
<th>Tested by</th>
<th>Software Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>3358</td>
<td>Jul-2021</td>
<td>Inspur Corporation</td>
<td>May-2021</td>
<td>Inspur Corporation</td>
<td>Dec-2020</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 358**

**SPECrate®2017_int_peak = 372**

### Compiler Version Notes (Continued)

| C               | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak) | 525.x264_r(base, peak) 557.xz_r(base) |
|-----------------|-------------------------------------------------------------------------------------------------|
| Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113 | Copyright (C) 1985-2020 Intel Corporation. All rights reserved. |

<table>
<thead>
<tr>
<th>C</th>
<th>500.perlbench_r(peak) 557.xz_r(peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000</td>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C</th>
<th>502.gcc_r(peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2021.1 Build 20201113</td>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
</tbody>
</table>

| C               | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak) | 525.x264_r(base, peak) 557.xz_r(base) |
|-----------------|-------------------------------------------------------------------------------------------------|
| Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113 | Copyright (C) 1985-2020 Intel Corporation. All rights reserved. |

<table>
<thead>
<tr>
<th>C++</th>
<th>520.omnetpp_r(base, peak) 523.xalancbmk_r(base, peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113</td>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
</tr>
</tbody>
</table>

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

(Continued on next page)
Inspur Corporation

Inspur NF5180M6 (Intel Xeon Gold 6330N)

**SPEC CPU®2017 Integer Rate Result**

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

**SPECrater®2017_int_base = 358**  
**SPECrater®2017_int_peak = 372**  

**Test Date:** Jul-2021  
**Hardware Availability:** May-2021  
**Software Availability:** Dec-2020

---

**Compiler Version Notes (Continued)**

Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on  
Intel(R) 64, Version 2021.1 Build 20201112_000000  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

---

**Base Compiler Invocation**

C benchmarks:  
`icx`

C++ benchmarks:  
`icpx`

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:  

C++ benchmarks:  
`-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math -flto`

---

(Continued on next page)
**SPEC CPU®2017 Integer Rate Result**

**Inspur Corporation**

Inspur NF5180M6 (Intel Xeon Gold 6330N)

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base = 358</th>
<th>SPECrate®2017_int_peak = 372</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>3358</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>Inspur Corporation</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Inspur Corporation</td>
</tr>
<tr>
<td>Test Date:</td>
<td>Jul-2021</td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>May-2021</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Dec-2020</td>
</tr>
</tbody>
</table>

### Base Optimization Flags (Continued)

C++ benchmarks (continued):
- `-mfpmath=sse`  
- `-funroll-loops`  
- `-qopt-mem-layout-trans=4`  
- `-mbranches-within-32B-boundaries`  
- `-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin`  
- `-lqkmalloc`

Fortran benchmarks:
- `-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ipo -no-prec-div`  
- `-qopt-mem-layout-trans=4 -nostandard-realloc-lhs -align array32byte`  
- `-auto -mbranches-within-32B-boundaries`  
- `-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin`  
- `-lqkmalloc`

### Peak Compiler Invocation

C benchmarks (except as noted below):
- `icx`

500.perlbench_r: `icc`

557.xz_r: `icc`

C++ benchmarks:
- `icpx`

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: `-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`
Inspur Corporation
Inspur NF5180M6 (Intel Xeon Gold 6330N)

SPECrate®2017_int_base = 358
SPECrate®2017_int_peak = 372

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

Test Date: Jul-2021
Hardware Availability: May-2021
Software Availability: Dec-2020

Peak Optimization Flags

C benchmarks:
500.perlbench_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2)
-xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -fno-strict-overflow
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc
502.gcc_r: -m32
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/ia32_lin
-std=gnu89 -Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX512 -flto
-Ofast(pass 1) -O3 -ffast-math -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries
-L/usr/local/jemalloc32-5.0.1/lib -ljemalloc
505.mcf_r: basepeak = yes
525.x264_r: -w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -flto
-O3 -ffast-math -qopt-mem-layout-trans=4 -fno-alias
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc
557.xz_r: -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc

C++ benchmarks:
520.omnetpp_r: basepeak = yes
523.xalancbmk_r: basepeak = yes
531.deepsjeng_r: basepeak = yes
541.leela_r: basepeak = yes

Fortran benchmarks:
548.exchange2_r: basepeak = yes
## SPEC CPU®2017 Integer Rate Result

### Inspur Corporation

**Inspur NF5180M6 (Intel Xeon Gold 6330N)**

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base</th>
<th>358</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak</td>
<td>372</td>
</tr>
</tbody>
</table>

| CPU2017 License: | 3358 |
| Test Sponsor:   | Inspur Corporation |
| Tested by:      | Inspur Corporation |
| Test Date:      | Jul-2021 |
| Hardware Availability: | May-2021 |
| Software Availability: | Dec-2020 |

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


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


SPEC CPU and SPECrate are registered trademarks 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 info@spec.org.

Tested with SPEC CPU®2017 v1.1.8 on 2021-07-03 13:04:58-0400.
Report generated on 2021-08-04 18:40:38 by CPU2017 PDF formatter v6442.
Originally published on 2021-08-03.