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<th>Benchmark</th>
<th>Threads</th>
<th>SPECspeed2017_int_base</th>
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<td>657.xz_s</td>
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### Hardware

- **CPU Name:** Intel Xeon Gold 5122
- **Max MHz.:** 3700
- **Nominal:** 3600
- **Enabled:** 16 cores, 4 chips
- **Orderable:** 1, 2, 4 chip(s)
- **Cache L1:** 32 KB I + 32 KB D on chip per core
- **L2:** 1 MB I+D on chip per core
- **L3:** 16.5 MB I+D on chip per chip
- **Other:** None
- **Memory:** 384 GB (48 x 8 GB 2Rx8 PC4-2666V-R)
- **Storage:** 1 x 960 GB SATA SSD, RAID 0
- **Other:** None

### Software

- **OS:** Red Hat Enterprise Linux Server release 7.3 (Maipo)
- **Kernel:** 3.10.0-514.el7.x86_64
- **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:** Yes
- **Firmware:** HPE BIOS Version U34 released Oct-2017 (tested with U34 9/29/2017)
- **File System:** xfs
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 64-bit
- **Peak Pointers:** Not Applicable
- **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
Hewlett Packard Enterprise  
ProLiant DL560 Gen10  
(3.60 GHz, Intel Xeon Gold 5122)

Specspeed2017_int_base = 8.48  
Specspeed2017_int_peak = Not Run

### Results Table

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</table>

### Operating System Notes

- Stack size set to unlimited using "ulimit -s unlimited"
- Transparent Huge Pages enabled by default
- Filesystem page cache cleared with:
  - shell invocation of 'sync; echo 3 > /proc/sys/vm/drop_caches' prior to run
- irqbalance disabled with "systemctl stop irqbalance"
- tuned profile set with "tuned-adm profile throughput-performance"

### General Notes

- Environment variables set by runcpu before the start of the run:
  - KMP_AFFINITY = "granularity=fine,compact"
  - LD_LIBRARY_PATH = "/home/cpu2017/lib/ia32/:/home/cpu2017/lib/intel64/:/home/cpu2017/je5.0.1-32:/home/cpu2017/je5.0.1-64"
  - OMP_STACKSIZE = "192M"

  - Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM
  - memory using Redhat Enterprise Linux 7.4

### Platform Notes

- BIOS Configuration:
  - Intel Hyperthreading set to Disabled
  - Thermal Configuration set to Maximum Cooling
  - LLC Prefetch set to Enabled
  - LLC Dead Line Allocation set to Disabled
  - Stale A to S set to Enabled
  - Memory Patrol Scrubbing set to Disabled
  - Workload Profile set to General Peak Frequency Compute

(Continued on next page)
**SPEC CPU2017 Integer Speed Result**

**Hewlett Packard Enterprise**
(Test Sponsor: HPE)  
ProLiant DL560 Gen10  
(3.60 GHz, Intel Xeon Gold 5122)

SPECspeed2017_int_base = 8.48  
SPECspeed2017_int_peak = Not Run

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<td>Sep-2017</td>
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</table>

**Platform Notes (Continued)**

Energy/Performance Bias set to Maximum Performance  
Workload Profile set to Custom  
NUMA Group Size Optimization set to Flat  
Sysinfo program /home/cpu2017/bin/sysinfo  
Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd6l8bcc09ic0f  
running on DL560G10 Wed Nov 22 08:28:37 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) Gold 5122 CPU @ 3.60GHz  
  4 "physical id"s (chips)  
  16 "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: 4  
  siblings: 4  
  physical 0: cores 1 5 9 13  
  physical 1: cores 0 5 9 13  
  physical 2: cores 1 5 9 13  
  physical 3: cores 1 2 5 11

From lscpu:  
Architecture: x86_64  
CPU op-mode(s): 32-bit, 64-bit  
Byte Order: Little Endian  
CPU(s): 16  
On-line CPU(s) list: 0-15  
Thread(s) per core: 1  
Core(s) per socket: 4  
Socket(s): 4  
NUMA node(s): 4  
Vendor ID: GenuineIntel  
CPU family: 6  
Model: 85  
Model name: Intel(R) Xeon(R) Gold 5122 CPU @ 3.60GHz  
Stepping: 4  
CPU MHz: 3600.000  
BogoMIPS: 7207.30  
Virtualization: VT-x  
L1d cache: 32K  
L1i cache: 32K  
L2 cache: 1024K  
L3 cache: 16896K  
NUMA node0 CPU(s): 0-3

(Continued on next page)
SPEC CPU2017 Integer Speed Result

Hewlett Packard Enterprise  
(Test Sponsor: HPE)  
ProLiant DL560 Gen10  
(3.60 GHz, Intel Xeon Gold 5122)  

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**Platform Notes (Continued)**

- NUMA node1 CPU(s): 4-7
- NUMA node2 CPU(s): 8-11
- NUMA node3 CPU(s): 12-15

/proc/cpuinfo cache data  
cache size : 16896 KB

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

From /proc/meminfo  
MemTotal: 395931392 kB  
HugePages_Total: 0  
Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*  
NAME="Red Hat Enterprise Linux Server"  
VERSION="7.3 (Maipo)"  
ID="rhel"  
ID_LIKE="fedora"  
VERSION_ID="7.3"  
PRETTY_NAME="Red Hat Enterprise Linux Server 7.3 (Maipo)"  
ANSI_COLOR="0;31"  
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.3:GA:server"  
redhat-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)  
system-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)  

uname -a:  
Linux DL560G10 3.10.0-514.el7.x86_64 #1 SMP Wed Oct 19 11:24:13 EDT 2016 x86_64 x86_64 GNU/Linux

run-level 3 Nov 22 03:50

**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 HPE U34 09/29/2017  
- Memory: 48x UNKNOWN NOT AVAILABLE 8 GB 2 rank 2666

(Continued on next page)
SPEC CPU2017 Integer Speed Result

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Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL560 Gen10
(3.60 GHz, Intel Xeon Gold 5122)

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CPU2017 License: 3
Test Sponsor:  HPE
Tested by:  HPE

Platform Notes (Continued)
(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
CC  600.perlbench_s(base) 602.gcc_s(base) 605.mcf_s(base) 625.x264_s(base)
   657.xz_s(base)
==============================================================================
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
==============================================================================
CXXC 620.omnetpp_s(base) 623.xalancbmk_s(base) 631.deepsjeng_s(base)
   641.leela_s(base)
==============================================================================
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
==============================================================================
FC  648.exchange2_s(base)
==============================================================================
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Base Portability Flags

600.perlbench_s: -DSPEC_LP64  -DSPEC_LINUX_X64
602.gcc_s: -DSPEC_LP64

(Continued on next page)
### SPEC CPU2017 Integer Speed Result

**Hewlett Packard Enterprise**  
(Test Sponsor: HPE)  
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#### Base Portability Flags (Continued)

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#### Base Optimization Flags

**C benchmarks:**
- Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div  
- qopt-mem-layout-trans=3 -qopenmp -DSPEC_OPENMP  
- 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

#### Base Other Flags

**C benchmarks:**
- m64 -std=c11

**C++ benchmarks:**
- m64

**Fortran benchmarks:**
- m64

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


http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revH.html
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You can also download the XML flags sources by saving the following links:

- http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-V1.2-SEX-revH.xml

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

Tested with SPEC CPU2017 v1.0.2 on 2017-11-22 06:28:36-0500.
Report generated on 2018-10-31 17:12:17 by CPU2017 PDF formatter v6067.