



# SPEC CPU®2017 Integer Rate Result

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## Hewlett Packard Enterprise

(Test Sponsor: HPE)

### HPE Compute Scale-up Server 3250

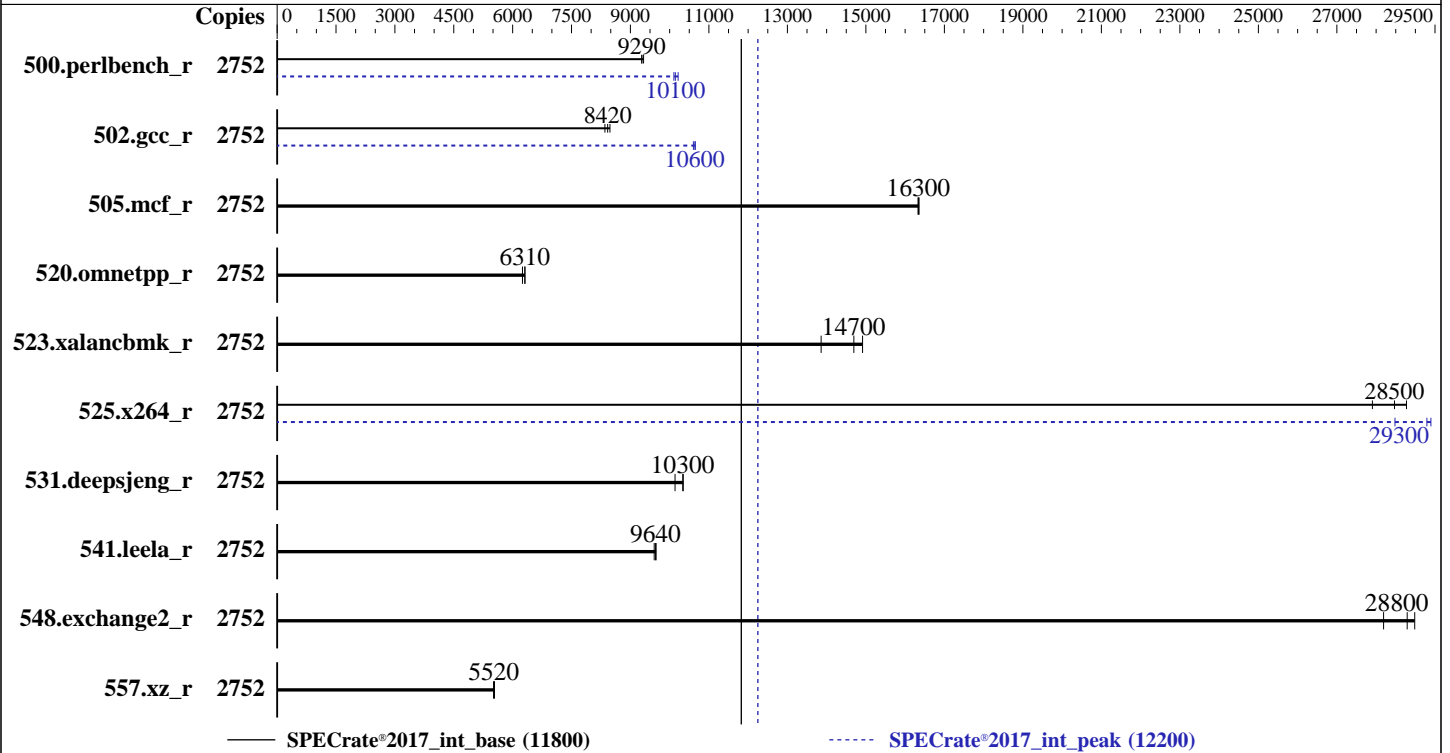
(2.00 GHz, Intel Xeon 6788P)

SPECrate®2017\_int\_base = 11800

SPECrate®2017\_int\_peak = 12200

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

Test Date: Feb-2026  
Hardware Availability: Apr-2026  
Software Availability: Feb-2026



### Hardware

CPU Name: Intel Xeon 6788P  
Max MHz: 3800  
Nominal: 2000  
Enabled: 1376 cores, 16 chips, 2 threads/core  
Orderable: 4, 8, 12, 16 chip(s)  
Cache L1: 64 KB I + 48 KB D on chip per core  
L2: 2 MB I+D on chip per core  
L3: 336 MB I+D on chip per chip  
Other: None  
Memory: 8 TB (128 x 64 GB 2Rx4 PC5-6400B-R)  
Storage: 1 x 1.5 TB NVMe SSD  
Other: CPU Cooling: Air

### Software

OS: SUSE Linux Enterprise Server 15 SP7  
Kernel 6.4.0-150700.53.31-default  
Compiler: C/C++: Version 2025.2 of Intel oneAPI DPC++/C++ Compiler for Linux;  
Fortran: Version 2025.2 of Intel Fortran Compiler for Linux;  
C: Version 2024.2.1 of Intel oneAPI DPC++/C++ Compiler for Linux;  
Parallel: No  
Firmware: HPE Firmware Bundle Version 1.0.308 01/21/2026 released Jan-2026  
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	2752	469	9340	472	9290	<b>471</b>	<b>9290</b>	2752	<b>432</b>	<b>10100</b>	429	10200	433	10100
502.gcc_r	2752	467	8350	460	8480	<b>463</b>	<b>8420</b>	2752	367	10600	<b>366</b>	<b>10600</b>	366	10700
505.mcf_r	2752	<b>272</b>	<b>16300</b>	272	16300	272	16400	2752	<b>272</b>	<b>16300</b>	272	16300	272	16400
520.omnetpp_r	2752	572	6310	578	6250	<b>572</b>	<b>6310</b>	2752	572	6310	578	6250	<b>572</b>	<b>6310</b>
523.xalancbmk_r	2752	<b>198</b>	<b>14700</b>	195	14900	210	13900	2752	<b>198</b>	<b>14700</b>	195	14900	210	13900
525.x264_r	2752	173	27900	<b>169</b>	<b>28500</b>	167	28800	2752	164	29400	169	28500	<b>165</b>	<b>29300</b>
531.deepsjeng_r	2752	<b>305</b>	<b>10300</b>	305	10300	311	10100	2752	<b>305</b>	<b>10300</b>	305	10300	311	10100
541.leela_r	2752	472	9650	474	9610	<b>473</b>	<b>9640</b>	2752	472	9650	474	9610	<b>473</b>	<b>9640</b>
548.exchange2_r	2752	249	29000	<b>250</b>	<b>28800</b>	256	28200	2752	249	29000	<b>250</b>	<b>28800</b>	256	28200
557.xz_r	2752	539	5510	537	5540	<b>538</b>	<b>5520</b>	2752	539	5510	537	5540	<b>538</b>	<b>5520</b>

SPECrate®2017\_int\_base = **11800**

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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"  
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>

## 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"  
MALLOCONF = "retain:true"

## General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using Red Hat Enterprise Linux 8.4  
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

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## General Notes (Continued)

sources available from jemalloc.net or <https://github.com/jemalloc/jemalloc/releases>

## Platform Notes

BIOS Configuration:

Workload Profile set to Custom  
 Energy/Performance Bias set to Maximum Performance  
 Energy Efficient Turbo set to Disabled  
 Advanced Memory Protection set to Advanced ECC Support  
 SR-IOV set to Disabled  
 Intel Virtualization Technology (Intel VT, VT-x) set to Disabled  
 Adjacent Sector Prefetch set to Disabled  
 DCU Stream Prefetcher set to Disabled  
 LLC Prefetch set to Enabled  
 Last Level Cache (LLC) Dead Line Allocation set to Disabled  
 Enhanced Processor Performance Profile set to Aggressive  
 Memory Patrol Scrubbing set to Disabled

Sysinfo program /home/cpu2017/bin/sysinfo  
 Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197  
 running on gnh-108 Thu Feb 26 00:27:01 2026

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

### Table of contents

1. uname -a
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
7. lscpu
8. numactl --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 254 (254.27+suse.179.g75eab961ea)
12. Services, from systemctl list-unit-files
13. Linux kernel boot-time arguments, from /proc/cmdline
14. cpupower frequency-info
15. tuned-adm active
16. sysctl
17. /sys/kernel/mm/transparent\_hugepage
18. /sys/kernel/mm/transparent\_hugepage/khugepaged
19. OS release
20. Disk information
21. /sys/devices/virtual/dmi/id
22. dmidecode
23. BIOS

```
1. uname -a
   Linux gnh-108 6.4.0-150700.53.31-default #1 SMP PREEMPT_DYNAMIC Tue Feb  3 14:18:17 UTC 2026 (73f3a11)
   x86_64 x86_64 x86_64 GNU/Linux
```

2. w

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## Platform Notes (Continued)

00:27:02 up 23 min, 2 users, load average: 0.99, 1.99, 3.13

USER	TTY	FROM	LOGIN@	IDLE	JCPU	PCPU	WHAT
test	ttyS0	-	00:14	4.00s	0.25s	0.09s	login -- test
test	pts/0	-	00:14	4.00s	0.44s	0.10s	sudo -i
root	pts/1	-	00:26	4.00s	2.28s	0.17s	sh ./intrate_final.sh

### 3. Username

From environment variable \$USER: root  
From the command 'logname': test

### 4. ulimit -a

```

core file size          (blocks, -c) 0
data seg size           (kbytes, -d) unlimited
scheduling priority     (-e) 0
file size               (blocks, -f) unlimited
pending signals         (-i) 32505174
max locked memory       (kbytes, -l) 8192
max memory size         (kbytes, -m) unlimited
open files              (-n) 40000
pipe size                (512 bytes, -p) 8
POSIX message queues    (bytes, -q) 819200
real-time priority      (-r) 0
stack size              (kbytes, -s) unlimited
cpu time                 (seconds, -t) unlimited
max user processes      (-u) 32505174
virtual memory          (kbytes, -v) unlimited
file locks               (-x) unlimited

```

### 5. sysinfo process ancestry

```

/usr/lib/systemd/systemd --switched-root --system --deserialize=38
login -- test
-bash
sudo -i
sudo -i
-bash
sudo ./intrate_final.sh
sudo ./intrate_final.sh
sh ./intrate_final.sh
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=2752 -c
  ic2025.2-lin-sapphirerapids-rate-20250605.cfg --define smt-on --define cores=1376 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --tune base,peak -o all intrate
runcpu --nobuild --action validate --define default-platform-flags --define numcopies=2752 --configfile
  ic2025.2-lin-sapphirerapids-rate-20250605.cfg --define smt-on --define cores=1376 --define physicalfirst
  --define invoke_with_interleave --define drop_caches --tune base,peak --output_format all --nopower
  --runmode rate --tune base:peak --size refrate intrate --nopreenv --note-preenv --logfile
  $SPEC/tmp/CPU2017.001/templogs/preenv.intrate.001.0.log --lognum 001.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2017

```

### 6. /proc/cpuinfo

```

model name      : Intel(R) Xeon(R) 6788P
vendor_id      : GenuineIntel
cpu family     : 6
model          : 173
stepping       : 1
microcode      : 0x1000405

```

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## Platform Notes (Continued)

```

bugs          : spectre_v1 spectre_v2 spec_store_bypass swappgs bhi vmscape
cpu cores    : 86
siblings     : 172
16 physical ids (chips)
2752 processors (hardware threads)
physical id 0: core ids 0-42,64-106
physical id 1: core ids 0-42,64-106
physical id 2: core ids 0-42,64-106
physical id 3: core ids 0-42,64-106
physical id 4: core ids 0-42,64-106
physical id 5: core ids 0-42,64-106
physical id 6: core ids 0-42,64-106
physical id 7: core ids 0-42,64-106
physical id 8: core ids 0-42,64-106
physical id 9: core ids 0-42,64-106
physical id 10: core ids 0-42,64-106
physical id 11: core ids 0-42,64-106
physical id 12: core ids 0-42,64-106
physical id 13: core ids 0-42,64-106
physical id 14: core ids 0-42,64-106
physical id 15: core ids 0-42,64-106
physical id 0: apicids 0-85,128-213
physical id 1: apicids 256-341,384-469
physical id 2: apicids 512-597,640-725
physical id 3: apicids 768-853,896-981
physical id 4: apicids 1024-1109,1152-1237
physical id 5: apicids 1280-1365,1408-1493
physical id 6: apicids 1536-1621,1664-1749
physical id 7: apicids 1792-1877,1920-2005
physical id 8: apicids 2048-2133,2176-2261
physical id 9: apicids 2304-2389,2432-2517
physical id 10: apicids 2560-2645,2688-2773
physical id 11: apicids 2816-2901,2944-3029
physical id 12: apicids 3072-3157,3200-3285
physical id 13: apicids 3328-3413,3456-3541
physical id 14: apicids 3584-3669,3712-3797
physical id 15: apicids 3840-3925,3968-4053

```

Caution: /proc/cpuinfo data regarding chips, cores, and threads is not necessarily reliable, especially for virtualized systems. Use the above data carefully.

### 7. lscpu

From lscpu from util-linux 2.40.4:

```

Architecture:          x86_64
CPU op-mode(s):       32-bit, 64-bit
Address sizes:        52 bits physical, 57 bits virtual
Byte Order:           Little Endian
CPU(s):               2752
On-line CPU(s) list:  0-2751
Vendor ID:            GenuineIntel
Model name:           Intel(R) Xeon(R) 6788P
CPU family:           6
Model:                173
Thread(s) per core:  2
Core(s) per socket:  86
Socket(s):            16
Stepping:             1
CPU(s) scaling MHz:  21%
CPU max MHz:         3800.0000

```

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## Platform Notes (Continued)

```

CPU min MHz: 800.0000
BogoMIPS: 3999.53
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 arch_perfmon pebs bts rep_good nopl
xtopology nonstop_tsc cpuid aperfmperf pni pclmulqdq dtes64
monitor ds_cpl 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
cat_l2 cdp_l3 intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp
ibrs_enhanced fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms
invpcid rtm cqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma
clflushopt clwb intel_pt avx512cd sha_ni avx512bw avx512vl
xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
cqm_mbm_local split_lock_detect user_shstk avx_vnni avx512_bf16
wbnoinvd dtherm ida arat pln pts hwp hwp_act_window hwp_epp
hwp_pkg_req avx512vbmi umip pku ospke waitpkg avx512_vbmi2 gfni
vaes vpclmulqdq avx512_vnni avx512_bitalg tme avx512_vpopcntdq
la57 rdpid bus_lock_detect cldemote movdiri movdir64b enqcmd fsrm
md_clear serialize tsxldtrk pconfig arch_lbr ibt amx_bf16
avx512_fp16 amx_tile amx_int8 flush_lli arch_capabilities
ibpb_exit_to_user
L1d cache: 64.5 MiB (1376 instances)
L1i cache: 86 MiB (1376 instances)
L2 cache: 2.7 GiB (1376 instances)
L3 cache: 5.3 GiB (16 instances)
NUMA node(s): 32
NUMA node0 CPU(s): 0-42,1376-1418
NUMA node1 CPU(s): 43-85,1419-1461
NUMA node2 CPU(s): 86-128,1462-1504
NUMA node3 CPU(s): 129-171,1505-1547
NUMA node4 CPU(s): 172-214,1548-1590
NUMA node5 CPU(s): 215-257,1591-1633
NUMA node6 CPU(s): 258-300,1634-1676
NUMA node7 CPU(s): 301-343,1677-1719
NUMA node8 CPU(s): 344-386,1720-1762
NUMA node9 CPU(s): 387-429,1763-1805
NUMA node10 CPU(s): 430-472,1806-1848
NUMA node11 CPU(s): 473-515,1849-1891
NUMA node12 CPU(s): 516-558,1892-1934
NUMA node13 CPU(s): 559-601,1935-1977
NUMA node14 CPU(s): 602-644,1978-2020
NUMA node15 CPU(s): 645-687,2021-2063
NUMA node16 CPU(s): 688-730,2064-2106
NUMA node17 CPU(s): 731-773,2107-2149
NUMA node18 CPU(s): 774-816,2150-2192
NUMA node19 CPU(s): 817-859,2193-2235
NUMA node20 CPU(s): 860-902,2236-2278
NUMA node21 CPU(s): 903-945,2279-2321
NUMA node22 CPU(s): 946-988,2322-2364
NUMA node23 CPU(s): 989-1031,2365-2407
NUMA node24 CPU(s): 1032-1074,2408-2450
NUMA node25 CPU(s): 1075-1117,2451-2493
NUMA node26 CPU(s): 1118-1160,2494-2536
NUMA node27 CPU(s): 1161-1203,2537-2579
NUMA node28 CPU(s): 1204-1246,2580-2622
NUMA node29 CPU(s): 1247-1289,2623-2665
NUMA node30 CPU(s): 1290-1332,2666-2708
NUMA node31 CPU(s): 1333-1375,2709-2751
Vulnerability Gather data sampling: Not affected

```

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## Platform Notes (Continued)

Vulnerability Indirect target selection: Not affected  
 Vulnerability Itlb multihit: Not affected  
 Vulnerability Lltf: Not affected  
 Vulnerability Mds: Not affected  
 Vulnerability Meltdown: Not affected  
 Vulnerability Mmio stale data: Not affected  
 Vulnerability Reg file data sampling: Not affected  
 Vulnerability Retbleed: Not affected  
 Vulnerability Spec rstack overflow: Not affected  
 Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl  
 Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and \_\_user pointer sanitization  
 Vulnerability Spectre v2: Mitigation; Enhanced / Automatic IBRS; IBPB conditional; PBRSE-eIBRS Not affected; BHI BHI\_DIS\_S  
 Vulnerability Srbds: Not affected  
 Vulnerability Tsa: Not affected  
 Vulnerability Tsx async abort: Not affected  
 Vulnerability Vmscape: Mitigation; IBPB before exit to userspace

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	48K	64.5M	12	Data	1	64	1	64
L1i	64K	86M	16	Instruction	1	64	1	64
L2	2M	2.7G	16	Unified	2	2048	1	64
L3	336M	5.3G	16	Unified	3	344064	1	64

8. numactl --hardware

NOTE: a numactl 'node' might or might not correspond to a physical chip.

```

available: 32 nodes (0-31)
node 0 cpus: 0-42,1376-1418
node 0 size: 256719 MB
node 0 free: 255821 MB
node 1 cpus: 43-85,1419-1461
node 1 size: 250007 MB
node 1 free: 249542 MB
node 2 cpus: 86-128,1462-1504
node 2 size: 258025 MB
node 2 free: 257541 MB
node 3 cpus: 129-171,1505-1547
node 3 size: 250023 MB
node 3 free: 249549 MB
node 4 cpus: 172-214,1548-1590
node 4 size: 258025 MB
node 4 free: 257577 MB
node 5 cpus: 215-257,1591-1633
node 5 size: 250023 MB
node 5 free: 249530 MB
node 6 cpus: 258-300,1634-1676
node 6 size: 258025 MB
node 6 free: 257329 MB
node 7 cpus: 301-343,1677-1719
node 7 size: 250023 MB
node 7 free: 249574 MB
node 8 cpus: 344-386,1720-1762
node 8 size: 258025 MB
node 8 free: 257740 MB
node 9 cpus: 387-429,1763-1805
node 9 size: 250023 MB
node 9 free: 249743 MB

```

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## Platform Notes (Continued)

```

node 10 cpus: 430-472,1806-1848
node 10 size: 258025 MB
node 10 free: 257742 MB
node 11 cpus: 473-515,1849-1891
node 11 size: 250023 MB
node 11 free: 249741 MB
node 12 cpus: 516-558,1892-1934
node 12 size: 258025 MB
node 12 free: 257734 MB
node 13 cpus: 559-601,1935-1977
node 13 size: 250023 MB
node 13 free: 249739 MB
node 14 cpus: 602-644,1978-2020
node 14 size: 258025 MB
node 14 free: 257739 MB
node 15 cpus: 645-687,2021-2063
node 15 size: 250023 MB
node 15 free: 249747 MB
node 16 cpus: 688-730,2064-2106
node 16 size: 258025 MB
node 16 free: 257750 MB
node 17 cpus: 731-773,2107-2149
node 17 size: 250023 MB
node 17 free: 249743 MB
node 18 cpus: 774-816,2150-2192
node 18 size: 258025 MB
node 18 free: 257737 MB
node 19 cpus: 817-859,2193-2235
node 19 size: 250023 MB
node 19 free: 249746 MB
node 20 cpus: 860-902,2236-2278
node 20 size: 258025 MB
node 20 free: 257741 MB
node 21 cpus: 903-945,2279-2321
node 21 size: 250023 MB
node 21 free: 249740 MB
node 22 cpus: 946-988,2322-2364
node 22 size: 258025 MB
node 22 free: 257737 MB
node 23 cpus: 989-1031,2365-2407
node 23 size: 249984 MB
node 23 free: 249709 MB
node 24 cpus: 1032-1074,2408-2450
node 24 size: 258025 MB
node 24 free: 257538 MB
node 25 cpus: 1075-1117,2451-2493
node 25 size: 250023 MB
node 25 free: 249553 MB
node 26 cpus: 1118-1160,2494-2536
node 26 size: 258025 MB
node 26 free: 257518 MB
node 27 cpus: 1161-1203,2537-2579
node 27 size: 250023 MB
node 27 free: 249554 MB
node 28 cpus: 1204-1246,2580-2622
node 28 size: 258025 MB
node 28 free: 257508 MB
node 29 cpus: 1247-1289,2623-2665
node 29 size: 250023 MB
node 29 free: 249435 MB

```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

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## Hewlett Packard Enterprise

(Test Sponsor: HPE)

### HPE Compute Scale-up Server 3250

(2.00 GHz, Intel Xeon 6788P)

SPECrate®2017\_int\_base = 11800

SPECrate®2017\_int\_peak = 12200

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

**Test Date:** Feb-2026  
**Hardware Availability:** Apr-2026  
**Software Availability:** Feb-2026

## Platform Notes (Continued)

```

node 30 cpus: 1290-1332,2666-2708
node 30 size: 258025 MB
node 30 free: 256858 MB
node 31 cpus: 1333-1375,2709-2751
node 31 size: 248940 MB
node 31 free: 248431 MB
node distances:
node 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 28 29 30 31
0: 10 12 16 16 16 16 18 18 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
1: 12 10 16 16 16 16 18 18 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
2: 16 16 10 12 18 18 16 16 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
3: 16 16 12 10 18 18 16 16 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
4: 16 16 18 18 10 12 16 16 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
5: 16 16 18 18 12 10 16 16 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
6: 18 18 16 16 16 16 10 12 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
7: 18 18 16 16 16 16 12 10 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
8: 40 40 40 40 40 40 40 40 10 12 16 16 16 16 18 18 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
9: 40 40 40 40 40 40 40 40 12 10 16 16 16 16 18 18 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
10: 40 40 40 40 40 40 40 40 16 16 10 12 18 18 16 16 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
11: 40 40 40 40 40 40 40 40 16 16 12 10 18 18 16 16 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
12: 40 40 40 40 40 40 40 40 16 16 18 18 10 12 16 16 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
13: 40 40 40 40 40 40 40 40 16 16 18 18 12 10 16 16 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
14: 40 40 40 40 40 40 40 40 18 18 16 16 16 16 10 12 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
15: 40 40 40 40 40 40 40 40 18 18 16 16 16 16 12 10 40 40 40 40 40 40 40 40 40
40 40 40 40 40 40 40
16: 40 40 40 40 40 40 40 40 40 40 40 40 40 40 10 12 16 16 16 16 18 18 40 40 40
40 40 40 40 40 40 40
17: 40 40 40 40 40 40 40 40 40 40 40 40 40 40 12 10 16 16 16 16 18 18 40 40 40
40 40 40 40 40 40 40
18: 40 40 40 40 40 40 40 40 40 40 40 40 40 40 16 16 10 12 18 18 16 16 40 40 40
40 40 40 40 40 40 40
19: 40 40 40 40 40 40 40 40 40 40 40 40 40 40 16 16 12 10 18 18 16 16 40 40 40
40 40 40 40 40 40 40
20: 40 40 40 40 40 40 40 40 40 40 40 40 40 40 16 16 18 18 10 12 16 16 40 40 40
40 40 40 40 40 40 40
21: 40 40 40 40 40 40 40 40 40 40 40 40 40 40 16 16 18 18 12 10 16 16 40 40 40
40 40 40 40 40 40 40
22: 40 40 40 40 40 40 40 40 40 40 40 40 40 40 18 18 16 16 16 16 10 12 40 40 40
40 40 40 40 40 40 40
23: 40 40 40 40 40 40 40 40 40 40 40 40 40 40 18 18 16 16 16 16 12 10 40 40 40
40 40 40 40 40 40 40
24: 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 10
12 16 16 16 16 18 18
25: 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 12

```

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# SPEC CPU®2017 Integer Rate Result

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**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

**HPE Compute Scale-up Server 3250**

(2.00 GHz, Intel Xeon 6788P)

**SPECrate®2017\_int\_base = 11800**

**SPECrate®2017\_int\_peak = 12200**

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

**Test Date:** Feb-2026  
**Hardware Availability:** Apr-2026  
**Software Availability:** Feb-2026

## Platform Notes (Continued)

```
console=ttyS0,115200
udev.children-max=512
nmi_watchdog=0
uv_nmi.action=kdump
add_efi_memmap
tsc=nowatchdog
earlyprintk=ttyS0,115200
log_buf_len=8M
numa_balancing=disable
crashkernel=1G,high
watchdog_thresh=60
workqueue.watchdog_thresh=120
```

```
-----
14. cpupower frequency-info
analyzing CPU 1324:
  current policy: frequency should be within 800 MHz and 3.80 GHz.
                   The governor "performance" may decide which speed to use
                   within this range.
  boost state support:
    Supported: yes
    Active: yes
```

```
-----
15. tuned-adm active
  No current active profile.
```

```
-----
16. sysctl
kernel.numa_balancing          0
kernel.randomize_va_space     2
vm.compaction_proactiveness    20
vm.dirty_background_bytes      0
vm.dirty_background_ratio      10
vm.dirty_bytes                 0
vm.dirty_expire_centisecs     3000
vm.dirty_ratio                 20
vm.dirty_writeback_centisecs   500
vm.dirtytime_expire_seconds    43200
vm.extfrag_threshold           500
vm.min_unmapped_ratio          1
vm.nr_hugepages                 0
vm.nr_hugepages_mempolicy      0
vm.nr_overcommit_hugepages     0
vm.swappiness                   60
vm.watermark_boost_factor      15000
vm.watermark_scale_factor      10
vm.zone_reclaim_mode           0
```

```
-----
17. /sys/kernel/mm/transparent_hugepage
defrag          always defer defer+madvice [madvice] never
enabled         [always] madvice never
hpage_pmd_size  2097152
shmem_enabled   always within_size advise [never] deny force
```

```
-----
18. /sys/kernel/mm/transparent_hugepage/khugepaged
alloc_sleep_millisecs  60000
defrag                  1
```

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# SPEC CPU®2017 Integer Rate Result

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(2.00 GHz, Intel Xeon 6788P)

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**Tested by:** HPE

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**Software Availability:** Feb-2026

## Platform Notes (Continued)

```
max_ptes_none          511
max_ptes_shared        256
max_ptes_swap           64
pages_to_scan          4096
scan_sleep_millisecs   10000
```

### 19. OS release

```
From /etc/*-release /etc/*-version
os-release              SUSE Linux Enterprise Server 15 SP7
hpe-foundation-release  HPE Foundation Software 2.5.9, Build 757.1570.260209T0200.a.sles15sp7hpe-260209T0200
```

### 20. Disk information

```
SPEC is set to: /home/cpu2017
Filesystem  Type  Size  Used Avail Use% Mounted on
/dev/nvme1n1p2  xfs  1.5T  40G  1.5T   3% /
```

### 21. /sys/devices/virtual/dmi/id

```
Vendor:      HPE
Product:     Compute Scale-up Server 3250
Product Family: 1590PID03030202
Serial:      5UFD3H1626-000
```

### 22. dmidecode

Additional information from dmidecode 3.6 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:
46x Samsung M321R8GA0EB2-CCPKC 64 GB 2 rank 6400
82x Samsung M321R8GA0EB2-CCPWC 64 GB 2 rank 6400
```

### 23. BIOS

(This section combines info from /sys/devices and dmidecode.)

```
BIOS Vendor:      HPE
BIOS Version:     Bundle:1.0.308-20260123_101935 SFW:010.001.004.000.2601210240
BIOS Date:        01/21/2026
```

## Compiler Version Notes

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

```
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2024.2.1 Build 20240711
Copyright (C) 1985-2024 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) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.
```

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# SPEC CPU®2017 Integer Rate Result

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**HPE Compute Scale-up Server 3250**

(2.00 GHz, Intel Xeon 6788P)

**SPECrate®2017\_int\_base = 11800**

**SPECrate®2017\_int\_peak = 12200**

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Feb-2026

**Hardware Availability:** Apr-2026

**Software Availability:** Feb-2026

## Compiler Version Notes (Continued)

=====  
C | 502.gcc\_r(peak)  
=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2024.2.1 Build 20240711  
Copyright (C) 1985-2024 Intel Corporation. All rights reserved.  
=====

=====  
C | 500.perlbench\_r(base, peak) 502.gcc\_r(base, peak) 505.mcf\_r(base, peak) 525.x264\_r(base, peak)  
| 557.xz\_r(base, peak)  
=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605  
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.  
=====

=====  
C++ | 520.omnetpp\_r(base, peak) 523.xalancbmk\_r(base, peak) 531.deepsjeng\_r(base, peak)  
| 541.leela\_r(base, peak)  
=====

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605  
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.  
=====

=====  
Fortran | 548.exchange2\_r(base, peak)  
=====

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version 2025.2.0 Build 20250605  
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.  
=====

## Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx

## 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

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# SPEC CPU®2017 Integer Rate Result

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**Hewlett Packard Enterprise**

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**HPE Compute Scale-up Server 3250**

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SPECrate®2017\_int\_base = 11800

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**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Feb-2026

**Hardware Availability:** Apr-2026

**Software Availability:** Feb-2026

## Base Portability Flags (Continued)

```
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:

```
-w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-L/home/specdev/intel-compilers/compiler/2025.2/lib -lqkmallo
```

C++ benchmarks:

```
-w -std=c++14 -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-fdelayed-template-parsing
-L/home/specdev/intel-compilers/compiler/2025.2/lib -lqkmallo
```

Fortran benchmarks:

```
-w -m64 -Wl,-z,muldefs -xsapphirerapids -O3 -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-L/home/specdev/intel-compilers/compiler/2025.2/lib -lqkmallo
```

## Peak Compiler Invocation

C benchmarks (except as noted below):

icx

502.gcc\_r: icx

C++ benchmarks:

icpx

Fortran benchmarks:

ifx



# SPEC CPU®2017 Integer Rate Result

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**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

**HPE Compute Scale-up Server 3250**

(2.00 GHz, Intel Xeon 6788P)

**SPECrate®2017\_int\_base = 11800**

**SPECrate®2017\_int\_peak = 12200**

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Feb-2026

**Hardware Availability:** Apr-2026

**Software Availability:** Feb-2026

## 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

```

## Peak Optimization Flags

C benchmarks:

```

500.perlbench_r: -w -std=c11 -m64 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profddata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-fno-strict-overflow -fno-strict-aliasing
-L/home/specdev/intel-compilers/compiler/2025.2/lib
-lqkmalloc

502.gcc_r: -m32 -L/home/specdev/intel-compilers/compiler/2024.2/lib32
-std=gnu89 -Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profddata(pass 2) -xCORE-AVX2(pass 1)
-flto -Ofast -xCORE-AVX512 -ffast-math -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/jemalloc32-5.0.1/lib -ljemalloc

505.mcf_r: basepeak = yes

525.x264_r: -w -std=c11 -m64 -Wl,-z,muldefs -xsapphirerapids -Ofast
-ffast-math -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-alias
-L/home/specdev/intel-compilers/compiler/2025.2/lib
-lqkmalloc

557.xz_r: basepeak = yes

```

C++ benchmarks:

(Continued on next page)



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**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Feb-2026

**Hardware Availability:** Apr-2026

**Software Availability:** Feb-2026

## Peak Optimization Flags (Continued)

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

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

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-CSS-GNR-rev1.3.html>

<http://www.spec.org/cpu2017/flags/Intel-ic2025-official-linux64.html>

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

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-CSS-GNR-rev1.3.xml>

<http://www.spec.org/cpu2017/flags/Intel-ic2025-official-linux64.xml>

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