



SPEC CPU®2026 Floating Point Rate Result

Copyright 2026 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant Compute DL580 Gen12 (2.00 Ghz, Intel Xeon 6788P)

SPECrate®2026_fp_base = 1150

SPECrate®2026_fp_energy_base = 38.6

SPECrate®2026_fp_peak = 1150

SPECrate®2026_fp_energy_peak = 38.6

CPU2026 License: 3

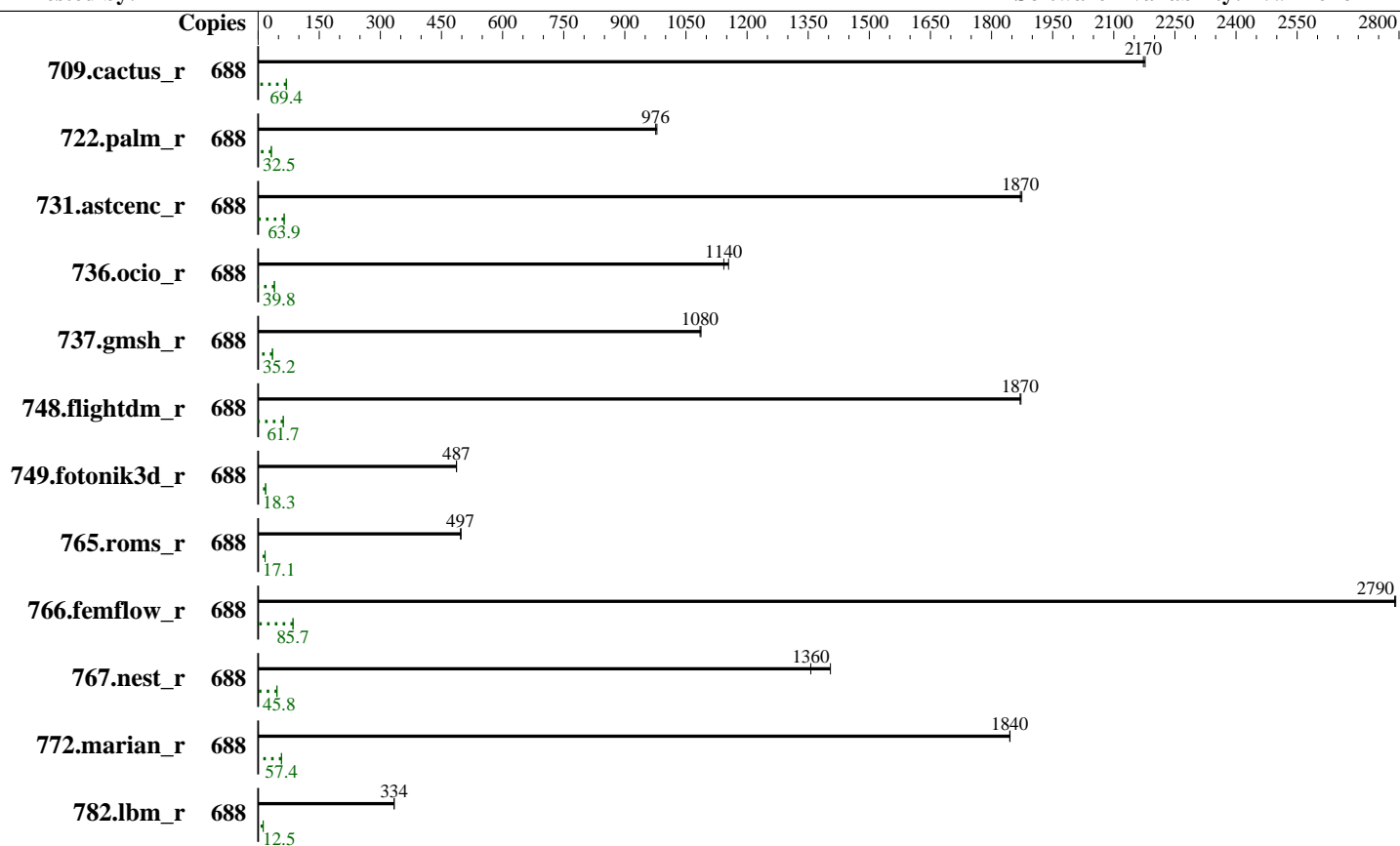
Test Sponsor: HPE

Tested by: HPE

Test Date: Feb-2026

Hardware Availability: Jul-2025

Software Availability: Jan-2026



Hardware

CPU Name: Intel Xeon 6788P
 Max MHz: 3800
 Nominal: 2000
 Enabled: 344 cores, 4 chips, 2 threads/core
 Orderable: 1,2,4 Chips
 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: 2 TB (32 x 64 GB 2Rx4 PC5-6400B-R)
 Storage: 1 x 1.6 TB NVMe SSD
 Cooling: Air
 Other: None

Software

OS: Ubuntu 24.04.3 LTS
 Kernel 6.8.0-94-generic
 Compiler: C/C++: Version 2025.3 of Intel oneAPI DPC++/C++ Compiler for Linux;
 Fortran: Version 2025.3 of Intel Fortran Compiler for Linux
 Compiler Category: Vendor
 Firmware: HPE BIOS Version v1.60 released Jan-2026
 File System: ext4
 System State: Run level 5 (multi-user, graphical)
 Base Pointers: 64-bit
 Peak Pointers: 64-bit
 Other: jemalloc memory allocator v5.3
 Power Management: BIOS is set to prefer performance at the cost of additional power usage



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Power

Max. Power (W): 2986.7
Idle Power (W): 1012.18
Min. Temperature (C): 21.81
Elevation (m): 132
Line Standard: 206 V / 60 Hz / 1 phase / 2 wires
Provisioning: Line-powered

Power Settings

Management FW: Version 1.19.00 of iLO7
released Dec 02 2025
Memory Mode: Normal

Power-Relevant Hardware

Power Supply: 1 x 2400 W (non-redundant)
Details: HPE 2400W M-CRPS Titanium Hot Plug Power Supply Kit (P67252-B21)
Backplane: N/A
Other Storage: 1 X Samsung 1.60TB 64G NVME SSD
Storage Model #: MO001600KYDMU
NICs Installed: 1 x Intel Ethernet I350T4 Adapter @ 1 Gb
NICs Enabled (FW/OS): 2 / 2
NICs Connected/Speed: 2 @ 1 Gb
Other HW Model #: 4 X performance fan kits

Power Analyzer #1

Power Analyzer: 192.168.1.10:8888
Hardware Vendor: Yokogawa
Model: WT210
Serial Number: 91GB45371
Input Connection: GPIB
Metrology Institute: NIST
Calibration By: Transcat
Calibration Label: 8-15
Calibration Date: 28-Jul-2025
PTDaemon® Version: 1.11.1 (462c978e; 2024-09-07)
Setup Description: Connected to power supply
Current Ranges Used: 5A, 10A
Voltage Range Used: 300V

Power Analyzer #2

Power Analyzer: 192.168.1.10:8890
Hardware Vendor: Yokogawa
Model: WT310E
Serial Number: C2SF14001V
Input Connection: GPIB
Metrology Institute: NIST
Calibration By: Transcat
Calibration Label: 8-15
Calibration Date: 07-Mar-2025
PTDaemon Version: 1.11.1 (462c978e; 2024-09-07)
Setup Description: Connected to power supply
Current Ranges Used: 5A, 10A
Voltage Range Used: 300V

Temperature Meter

Temperature Meter: 192.168.1.10:8889
Hardware Vendor: Digi
Model: Watchport
Serial Number: SV73303523
Input Connection: USB
PTDaemon Version: 1.11.1 (462c978e; 2024-09-07)
Setup Description: In front of main air inlet

Base Results Table

Benchmark	Copies	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power
709.cactus_r	688	<u>272</u>	<u>2170</u>	<u>723</u>	<u>69.4</u>	<u>2660</u>	<u>2990</u>	271	2180	728	69.0	2680	2960						

Table continues on next page. Results appear in the order in which they were run. Bold underlined text indicates a median measurement.



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SPECrate®2026_fp_peak = 1150

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Base Results Table (Continued)

Benchmark	Copies	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power
722.palm_r	688	928	979	2380	32.4	2560	2700	931	976	2380	32.5	2550	2700						
731.ascenc_r	688	309	1870	754	63.9	2440	2530	308	1870	755	63.8	2450	2550						
736.ocio_r	688	521	1150	1260	40.1	2410	2770	527	1140	1260	39.8	2400	2770						
737.gmsh_r	688	291	1080	752	35.2	2580	2820	291	1090	751	35.2	2580	2850						
748.flightdm_r	688	263	1870	671	61.7	2550	2760	263	1870	671	61.7	2550	2760						
749.fotonik3d_r	688	1633	487	3700	18.4	2260	2300	1634	487	3700	18.3	2270	2320						
765.roms_r	688	2176	498	5510	17.2	2530	2590	2182	497	5530	17.1	2540	2590						
766.femflow_r	688	361	2790	999	85.6	2760	2870	362	2790	998	85.7	2760	2870						
767.nest_r	688	388	1400	977	46.5	2520	2840	402	1360	992	45.8	2470	2830						
772.marian_r	688	589	1850	1590	57.3	2710	2860	589	1840	1590	57.4	2700	2860						
782.lbm_r	688	1181	334	2810	12.5	2380	2410	1181	334	2810	12.5	2380	2410						

SPECrate®2026_fp_base = 1150

SPECrate®2026_fp_energy_base = 38.6

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Peak Results Table

Benchmark	Copies	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power	Seconds	Ratio	Energy (kJ)	Energy Ratio	Average Power	Maximum Power
709.cactus_r	688	272	2170	723	69.4	2660	2990	271	2180	728	69.0	2680	2960						
722.palm_r	688	928	979	2380	32.4	2560	2700	931	976	2380	32.5	2550	2700						
731.ascenc_r	688	309	1870	754	63.9	2440	2530	308	1870	755	63.8	2450	2550						
736.ocio_r	688	521	1150	1260	40.1	2410	2770	527	1140	1260	39.8	2400	2770						
737.gmsh_r	688	291	1080	752	35.2	2580	2820	291	1090	751	35.2	2580	2850						
748.flightdm_r	688	263	1870	671	61.7	2550	2760	263	1870	671	61.7	2550	2760						
749.fotonik3d_r	688	1633	487	3700	18.4	2260	2300	1634	487	3700	18.3	2270	2320						
765.roms_r	688	2176	498	5510	17.2	2530	2590	2182	497	5530	17.1	2540	2590						
766.femflow_r	688	361	2790	999	85.6	2760	2870	362	2790	998	85.7	2760	2870						
767.nest_r	688	388	1400	977	46.5	2520	2840	402	1360	992	45.8	2470	2830						
772.marian_r	688	589	1850	1590	57.3	2710	2860	589	1840	1590	57.4	2700	2860						
782.lbm_r	688	1181	334	2810	12.5	2380	2410	1181	334	2810	12.5	2380	2410						

SPECrate®2026_fp_peak = 1150

SPECrate®2026_fp_energy_peak = 38.6

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

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Operating System Notes (Continued)

```
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/cpu2026/lib"
MALLOC_CONF = "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 sources available from jemalloc.net or <https://github.com/jemalloc/jemalloc/releases>

Platform Notes

BIOS Configurations : Parameters are selected in the order shown below
Workload Profile set to General Throughput Compute
Enhanced Processor Performance Profile set to Aggressive
Thermal Configuration set to Maximum Cooling
Memory Patrol Scrubbing set to Disabled
Last Level Cache (LLC) Prefetch set to Enabled
XPT Prefetch set to Disabled
Intel UPI Prefetch set to Disabled
Workload Profile set to Custom
DCU Stream Prefetcher set to Disabled
Adjacent Sector Prefetch set to Disabled

```
Sysinfo program /home/cpu2026/bin/sysinfo  
Rev: 069f95da7e7f5d81b2ce48a82150e54f  
running on admin1 Mon Feb 9 05:17:13 2026
```

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

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Platform Notes (Continued)

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3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
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9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.12)
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 -srvm
Linux 6.8.0-94-generic #96-Ubuntu SMP PREEMPT_DYNAMIC Fri Jan 9 20:36:55 UTC 2026 x86_64

2. w
05:17:13 up 4:58, 4 users, load average: 0.16, 0.03, 0.23
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
admin1 172.16.0.100 03:08 4:57m 0.00s 0.04s sshd: admin1 [priv]
admin1 172.16.0.100 00:20 4:57m 0.00s 0.02s sshd: admin1 [priv]
admin1 172.16.0.100 00:19 4:57m 0.00s 0.01s sshd: admin1 [priv]
admin1 tty1 - 00:19 4:57m 0.03s ? sudo -i

3. Username
From environment variable \$USER: root

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Platform Notes (Continued)

From the command 'logname': admin1

```

4. ulimit -a
time(seconds)          unlimited
file(blocks)           unlimited
data(kbytes)           unlimited
stack(kbytes)          unlimited
coredump(blocks)      0
memory(kbytes)         unlimited
locked memory(kbytes) 264124528
process                8253571
nofiles                1024
vmemory(kbytes)        unlimited
locks                  unlimited
rtprio                 0

```

```

5. sysinfo process ancestry
/sbin/init
sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups
sshd: admin1 [priv]
sshd: admin1@pts/3
-bash
sudo -i
sudo -i
-bash
-bash
runcpu --nobuild --reportable --action validate --power --define default-platform-flags --copies 688 -c
ic2025.3-sapphirerapids-cpu2026-0.902-rate-20260121.cfg --define smt-on --define cores=344 --define
physicalfirst --define invoke_with_interleave --define drop_caches --tune base -n 2 -o all fprate
runcpu --nobuild --reportable --action validate --power --define default-platform-flags --copies 688
--configfile ic2025.3-sapphirerapids-cpu2026-0.902-rate-20260121.cfg --define smt-on --define cores=344
--define physicalfirst --define invoke_with_interleave --define drop_caches --tune base --iterations 2
--output_format all --runmode rate --tune base --size refrate fprate --nopreenv --note-preenv --logfile
$SPEC/tmp/CPU2026.048/templogs/preenv.fprate.048.0.log --lognum 048.0 --from_runcpu 2
specperl $SPEC/bin/sysinfo
$SPEC = /home/cpu2026

```

```

6. /proc/cpuinfo
model name      : Intel(R) Xeon(R) 6788P
vendor_id      : GenuineIntel
cpu family     : 6
model          : 173

```

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Platform Notes (Continued)

```

stepping          : 1
microcode         : 0x1000411
bugs              : spectre_v1 spectre_v2 spec_store_bypass swapgs bhi vmscape
cpu cores         : 86
siblings          : 172
4 physical ids (chips)
688 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 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

```

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 2.39.3:

```

Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Address sizes:          46 bits physical, 57 bits virtual
Byte Order:             Little Endian
CPU(s):                 688
On-line CPU(s) list:   0-687
Vendor ID:              GenuineIntel
BIOS Vendor ID:        Intel(R) Corporation
Model name:             Intel(R) Xeon(R) 6788P
BIOS Model name:       Intel(R) Xeon(R) 6788P  CPU @ 2.0GHz
BIOS CPU family:       179
CPU family:             6
Model:                  173
Thread(s) per core:    2
Core(s) per socket:    86
Socket(s):              4
Stepping:               1
CPU(s) scaling MHz:    22%
CPU max MHz:            3800.0000
CPU min MHz:            800.0000
BogoMIPS:               4000.00

```

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

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Platform Notes (Continued)

```

pdpelgb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good
nopl xtopology nonstop_tsc cpuid aperfmperf tsc_known_freq 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 cpuid_fault epb cat_l3 cat_l2 cdp_l3 cdp_l2 ssbd mba
ibrs ibpb stibp ibrs_enhanced tpr_shadow flexpriority ept vpid ept_ad
fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms invpcid 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 vnmi 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_lld
arch_capabilities ibpb_exit_to_user

```

```

Virtualization: VT-x
L1d cache: 16.1 MiB (344 instances)
L1i cache: 21.5 MiB (344 instances)
L2 cache: 688 MiB (344 instances)
L3 cache: 1.3 GiB (4 instances)
NUMA node(s): 8
NUMA node0 CPU(s): 0-42,344-386
NUMA node1 CPU(s): 43-85,387-429
NUMA node2 CPU(s): 86-128,430-472
NUMA node3 CPU(s): 129-171,473-515
NUMA node4 CPU(s): 172-214,516-558
NUMA node5 CPU(s): 215-257,559-601
NUMA node6 CPU(s): 258-300,602-644
NUMA node7 CPU(s): 301-343,645-687
Vulnerability Gather data sampling: Not affected
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf: 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; RSB filling;
PBRSE-eIBRS Not affected; BHI BHI_DIS_S

```

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Platform Notes (Continued)

Vulnerability Srbds:	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	16.1M	12	Data	1	64	1	64
L1i	64K	21.5M	16	Instruction	1	64	1	64
L2	2M	688M	16	Unified	2	2048	1	64
L3	336M	1.3G	16	Unified	3	344064	1	64

8. numactl --hardware

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

```

available: 8 nodes (0-7)
node 0 cpus: 0-42,344-386
node 0 size: 257414 MB
node 0 free: 244408 MB
node 1 cpus: 43-85,387-429
node 1 size: 258018 MB
node 1 free: 247937 MB
node 2 cpus: 86-128,430-472
node 2 size: 257975 MB
node 2 free: 247840 MB
node 3 cpus: 129-171,473-515
node 3 size: 258018 MB
node 3 free: 247930 MB
node 4 cpus: 172-214,516-558
node 4 size: 258018 MB
node 4 free: 247887 MB
node 5 cpus: 215-257,559-601
node 5 size: 258018 MB
node 5 free: 247778 MB
node 6 cpus: 258-300,602-644
node 6 size: 258018 MB
node 6 free: 246742 MB
node 7 cpus: 301-343,645-687
node 7 size: 257989 MB
node 7 free: 247888 MB

```

```

node distances:
node  0  1  2  3  4  5  6  7
  0:  10 12 21 21 21 21 21 21
  1:  12 10 21 21 21 21 21 21
  2:  21 21 10 12 21 21 21 21
  3:  21 21 12 10 21 21 21 21

```

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(Test Sponsor: HPE)
ProLiant Compute DL580 Gen12
(2.00 Ghz, Intel Xeon 6788P)

SPECrate®2026_fp_base = 1150
SPECrate®2026_fp_energy_base = 38.6
SPECrate®2026_fp_peak = 1150
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CPU2026 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Feb-2026
Hardware Availability: Jul-2025
Software Availability: Jan-2026

Platform Notes (Continued)

```
4: 21 21 21 21 10 12 21 21
5: 21 21 21 21 12 10 21 21
6: 21 21 21 21 21 21 10 12
7: 21 21 21 21 21 21 12 10
```

9. /proc/meminfo
MemTotal: 2112996224 kB

10. who -r
run-level 5 Feb 9 00:19

11. Systemd service manager version: systemd 255 (255.4-1ubuntu8.12)
Default Target Status
graphical running

12. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	ModemManager apparmor appport blk-availability cloud-config cloud-final cloud-init cloud-init-local console-setup cron dmesg e2scrub_reap finalrd getty@ gpu-manager grub-common grub-initrd-fallback keyboard-setup lvm2-monitor multipathd networkd-dispatcher open-iscsi open-vm-tools pollinate rsyslog secureboot-db setvtrgb snapd sysstat systemd-networkd systemd-networkd-wait-online systemd-pstore systemd-resolved systemd-timesyncd thermald tuned ua-reboot-cmds ubuntu-advantage udisks2 ufw unattended-upgrades vgauth
enabled-runtime	netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs
disabled	console-getty debug-shell iscsid nftables rsync serial-getty@ ssh systemd-boot-check-no-failures systemd-confext systemd-network-generator systemd-networkd-wait-online@ systemd-pcrlock-file-system systemd-pcrlock-firmware-code systemd-pcrlock-firmware-config systemd-pcrlock-machine-id systemd-pcrlock-make-policy systemd-pcrlock-secureboot-authority systemd-pcrlock-secureboot-policy systemd-sysextr systemd-time-wait-sync upower
indirect	systemd-sysupdate systemd-sysupdate-reboot uidd
masked	cryptdisks cryptdisks-early hwclock multipath-tools-boot screen-cleanup sudo x11-common

13. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-6.8.0-94-generic
root=UUID=1167c2a9-3418-41e4-8aa6-434d83833b85
ro

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Platform Notes (Continued)

```

14. cpupower frequency-info
    analyzing CPU 369:
        current policy: frequency should be within 800 MHz and 3.80 GHz.
                        The governor "powersave" may decide which speed to use
                        within this range.

        boost state support:
            Supported: yes
            Active: yes

```

```

-----
15. tuned-adm active
    Current active profile: balanced

```

```

-----
16. sysctl
kernel.numa_balancing          1
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+madvise [madvise] never
enabled        always [madvise] 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

```

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Platform Notes (Continued)

```

defrag                1
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 Ubuntu 24.04.3 LTS

```

20. Disk information

SPEC is set to: /home/cpu2026

```

Filesystem  Type  Size  Used Avail Use% Mounted on
/dev/nvme0n1p2 ext4  1.5T  469G  923G  34% /

```

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

```

Vendor:      HPE
Product:     HPE ProLiant Compute DL580 Gen12
Product Family: ProLiant
Serial:      7CED2FP013

```

22. dmidecode

Additional information from dmidecode 3.5 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:

```

31x Hynix HMCG94AHBRA480N 64 GB 2 rank 6400
1x Hynix HMCG94AHBRA487N 64 GB 2 rank 6400

```

23. BIOS

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

```

BIOS Vendor:      HPE
BIOS Version:     1.60
BIOS Date:        01/09/2026
BIOS Revision:    1.60
Firmware Revision: 1.19

```



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Compiler Version Notes

=====
C | 782.lbm_r(base)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2025.3.0 Build 20251010
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.

=====
C++ | 731.astcenc_r(base) 736.ocio_r(base) 748.flightdm_r(base)
766.femflow_r(base) 767.nest_r(base) 772.marian_r(base)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2025.3.0 Build 20251010
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.

=====
C++, C | 709.cactus_r(base) 737.gmsh_r(base)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2025.3.0 Build 20251010
Copyright (C) 1985-2025 Intel Corporation. All rights reserved.

=====
Fortran | 722.palm_r(base) 749.fotonik3d_r(base) 765.roms_r(base)

Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version
2025.3.0 Build 20251010
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Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

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Base Compiler Invocation (Continued)

Benchmarks using both C and C++:
icpx icx

Base Portability Flags

709.cactus_r: -DSPEC_LP64
722.palm_r: -DSPEC_LP64
731.ascenc_r: -DSPEC_LP64
736.ocio_r: -DSPEC_LP64
737.gmsh_r: -DSPEC_LP64 -fno-associative-math
748.flightdm_r: -DSPEC_LP64
749.fotonik3d_r: -DSPEC_LP64
765.roms_r: -DSPEC_LP64
766.femflow_r: -DSPEC_LP64
767.nest_r: -DSPEC_LP64
772.marian_r: -DSPEC_LP64
782.lbm_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:

-m64 -std=c18 -Wl,-z,muldefs -xsapphirerapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib
-ljemalloc

C++ benchmarks:

-m64 -std=c++17 -Wl,-z,muldefs -xsapphirerapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib
-ljemalloc

Fortran benchmarks:

-m64 -stand f18 -Wl,-z,muldefs -xsapphirerapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -nostandard-realloc-lhs
-align array32byte -auto -L/usr/local/jemalloc-5.3.0/lib -ljemalloc

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Base Optimization Flags (Continued)

Benchmarks using both C and C++:

```
-m64 -std=c++17 -std=c18 -Wl,-z,muldefs -xsapphirerapids
-mprefer-vector-width=512 -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -L/usr/local/jemalloc-5.3.0/lib
-ljemalloc
```

Peak Optimization Flags

C benchmarks:

782.lbm_r: basepeak = yes

C++ benchmarks:

731.ascenc_r: basepeak = yes

736.ocio_r: basepeak = yes

748.flightdm_r: basepeak = yes

766.femflow_r: basepeak = yes

767.nest_r: basepeak = yes

772.marian_r: basepeak = yes

Fortran benchmarks:

722.palm_r: basepeak = yes

749.fotonik3d_r: basepeak = yes

765.roms_r: basepeak = yes

Benchmarks using both C and C++:

709.cactus_r: basepeak = yes

737.gmsh_r: basepeak = yes



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

<http://www.spec.org/cpu2026/results/flags/HPE-Platform-Flags-Intel-GNR-rev1.4.html>
<http://www.spec.org/cpu2026/results/flags/Intel-ic2025-official-linux64-cpu2026-0.902.html>

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

<http://www.spec.org/cpu2026/results/flags/HPE-Platform-Flags-Intel-GNR-rev1.4.xml>
<http://www.spec.org/cpu2026/results/flags/Intel-ic2025-official-linux64-cpu2026-0.902.xml>

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