



SPEC CPU®2026 Integer Rate Result

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New H3C Technologies Co., Ltd.

SPECrate®2026_int_base = 998

H3C UniServer R4900 G7 (Intel Xeon 6970E+)

SPECrate®2026_int_peak = 1050

CPU2026 License: 9066

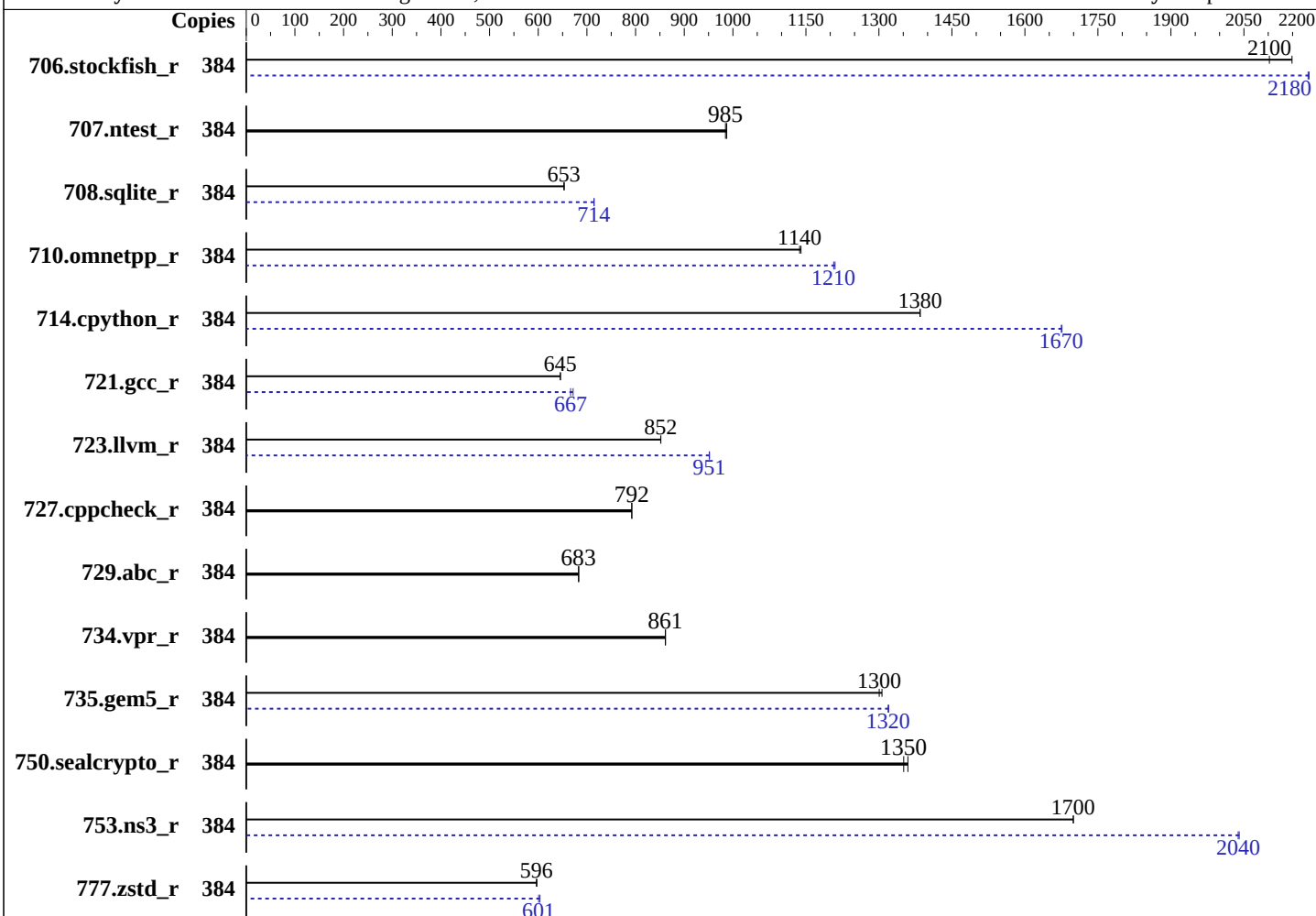
Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Sep-2026

Hardware Availability: Jun-2026

Software Availability: Apr-2026



Hardware

CPU Name: Intel Xeon 6970E+
Max MHz: 3200
Nominal: 2300
Enabled: 384 cores, 2 chips
Orderable: 1,2 chips
Cache L1: 64 KB I + 32 KB D on chip per core
L2: 192 MB I+D on chip per chip, 4 MB shared / 4 cores
L3: 480 MB I+D on chip per chip
Other: None
Memory: 1536 GB (24 x 64 GB 2Rx4 PC5-8000B-R)
Storage: 1 x 3.84 TB NVME SSD
Cooling: Air
Other: None

Software

OS: SUSE Linux Enterprise Server 15 SP7
kernel 6.4.0-150700.51-default
Compiler: C/C++: Version 2026.0 of Intel oneAPI DPC++/C++
Compiler for Linux;
Fortran: Version 2026.0 of Intel Fortran
Compiler for Linux
Compiler Category: Vendor
Firmware: Version 7.10.25P94 released May-2026 BIOS
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other: tcmalloc memory allocator v2.18.1

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Software (Continued)

Power Management: BIOS and OS set to prefer performance at the cost of additional power usage.

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
706.stockfish_r	384	225	2150	<u>230</u>	<u>2100</u>			384	<u>222</u>	<u>2180</u>	222	2180		
707.ntest_r	384	230	987	<u>231</u>	<u>985</u>			384	230	987	<u>231</u>	<u>985</u>		
708.sqlite_r	384	<u>311</u>	<u>653</u>	310	654			384	284	715	<u>284</u>	<u>714</u>		
710.omnetpp_r	384	<u>164</u>	<u>1140</u>	164	1140			384	<u>155</u>	<u>1210</u>	154	1210		
714.cpython_r	384	<u>133</u>	<u>1380</u>	133	1380			384	<u>110</u>	<u>1670</u>	110	1680		
721.gcc_r	384	<u>408</u>	<u>645</u>	408	646			384	392	672	<u>395</u>	<u>667</u>		
723.llvm_r	384	<u>229</u>	<u>852</u>	229	852			384	205	952	<u>205</u>	<u>951</u>		
727.cppcheck_r	384	<u>174</u>	<u>792</u>	174	792			384	<u>174</u>	<u>792</u>	174	792		
729.abc_r	384	258	683	<u>258</u>	<u>683</u>			384	258	683	<u>258</u>	<u>683</u>		
734.vpr_r	384	<u>206</u>	<u>861</u>	205	862			384	<u>206</u>	<u>861</u>	205	862		
735.gem5_r	384	<u>144</u>	<u>1300</u>	143	1310			384	142	1320	<u>142</u>	<u>1320</u>		
750.sealcrypto_r	384	<u>152</u>	<u>1350</u>	151	1360			384	<u>152</u>	<u>1350</u>	151	1360		
753.ns3_r	384	<u>139</u>	<u>1700</u>	139	1700			384	<u>115</u>	<u>2040</u>	115	2040		
777.zstd_r	384	414	597	<u>415</u>	<u>596</u>			384	410	604	<u>412</u>	<u>601</u>		

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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"

Environment Variables Notes

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

LD_LIBRARY_PATH = "/home/spec2026/lib"



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General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using CentOS Stream 9.

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>

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.

tcmalloc, a fast, multithreaded malloc implementation

built with the CentOS Stream 9, and the system compiler gcc 11.5.0

sources available from github.com/gperftools/gperftools

Platform Notes

BIOS Settings:

SNC = Enable

ACPI C6x Enumeration = C6 as ACPI C2

Latency Optimized Mode = Enabled

BMC Settings:

Fan mode = powerful mode

Sysinfo program /home/spec2026/bin/sysinfo

Rev: 779ab21020787073335a329f3a45e2cd

running on localhost Mon Sep 7 00:14:53 2026

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

Table of contents

-
1. uname -srvm
 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

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Platform Notes (Continued)

11. Systemd service manager version: systemd 254 (254.24+suse.148.g83b9060b6e)
12. Failed units, from systemctl list-units --state=failed
13. Services, from systemctl list-unit-files
14. Linux kernel boot-time arguments, from /proc/cmdline
15. cpupower frequency-info
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 -srvnm

Linux 6.4.0-150700.51-default #1 SMP PREEMPT_DYNAMIC Wed Apr 30 21:35:43 UTC 2025 (6930611/lp) x86_64

2. w

00:14:53 up 5 min, 1 user, load average: 0.23, 1.41, 0.88

USER	TTY	FROM	LOGIN@	IDLE	JCPU	PCPU	WHAT
root	tty1	-	00:13	11.00s	1.74s	0.02s	-bash

3. Username

From environment variable \$USER: root

4. ulimit -a

core file size	(blocks, -c)	unlimited
data seg size	(kbytes, -d)	unlimited
scheduling priority	(-e)	0
file size	(blocks, -f)	unlimited
pending signals	(-i)	6190019
max locked memory	(kbytes, -l)	8192
max memory size	(kbytes, -m)	unlimited
open files	(-n)	1024
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)	6190019
virtual memory	(kbytes, -v)	unlimited
file locks	(-x)	unlimited

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Platform Notes (Continued)

5. sysinfo process ancestry

```
/usr/lib/systemd/systemd --switched-root --system --deserialize=42
```

```
login -- root
```

```
-bash
```

```
-bash
```

```
runcpu --nobuild --reportable --action validate --define default-platform-flags --copies 384 -c  
ic2026.0-clearwaterforest-cpu2026-1.0.1-rate-20260429_revB.cfg --define smt-on --define cores=384 --define  
physicalfirst --define invoke_with_interleave --define drop_caches --reportable --tune base,peak -o all  
intrate
```

```
runcpu --nobuild --reportable --action validate --define default-platform-flags --copies 384 --configfile  
ic2026.0-clearwaterforest-cpu2026-1.0.1-rate-20260429_revB.cfg --define smt-on --define cores=384 --define  
physicalfirst --define invoke_with_interleave --define drop_caches --reportable --tune base,peak  
--output_format all --nopower --runmode rate --tune base:peak --size refrate intrate --nopreenv  
--note-preenv --logfile $SPEC/tmp/CPU2026.020/templogs/preenv.intrate.020.0.log --lognum 020.0  
--from_runcpu 2
```

```
specperl $SPEC/bin/sysinfo
```

```
$SPEC = /home/spec2026
```

6. /proc/cpuinfo

```
model name      : Intel(R) Xeon(R) 6970E+
```

```
vendor_id       : GenuineIntel
```

```
cpu family      : 6
```

```
model           : 221
```

```
stepping        : 1
```

```
microcode       : 0x11000120
```

```
bugs             : spectre_v1 spectre_v2 spec_store_bypass swapgs
```

```
cpu cores       : 192
```

```
siblings        : 192
```

```
2 physical ids (chips)
```

```
384 processors (hardware threads)
```

```
physical id 0: core ids 0-63,128-191,256-319
```

```
physical id 1: core ids 0-63,128-191,256-319
```

```
physical id 0: apicids
```

```
0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72  
, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 256, 258, 2  
60, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 31  
2, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364  
, 366, 368, 370, 372, 374, 376, 378, 380, 382, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544,  
546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 5  
98, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638  
physical id 1: apicids
```

```
1024, 1026, 1028, 1030, 1032, 1034, 1036, 1038, 1040, 1042, 1044, 1046, 1048, 1050, 1052, 1054, 1056, 1058, 1060, 1062, 1064,  
1066, 1068, 1070, 1072, 1074, 1076, 1078, 1080, 1082, 1084, 1086, 1088, 1090, 1092, 1094, 1096, 1098, 1100, 1102, 1104, 1106,  
1108, 1110, 1112, 1114, 1116, 1118, 1120, 1122, 1124, 1126, 1128, 1130, 1132, 1134, 1136, 1138, 1140, 1142, 1144, 1146, 1148,
```

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Platform Notes (Continued)

1150, 1280, 1282, 1284, 1286, 1288, 1290, 1292, 1294, 1296, 1298, 1300, 1302, 1304, 1306, 1308, 1310, 1312, 1314, 1316, 1318, 1320, 1322, 1324, 1326, 1328, 1330, 1332, 1334, 1336, 1338, 1340, 1342, 1344, 1346, 1348, 1350, 1352, 1354, 1356, 1358, 1360, 1362, 1364, 1366, 1368, 1370, 1372, 1374, 1376, 1378, 1380, 1382, 1384, 1386, 1388, 1390, 1392, 1394, 1396, 1398, 1400, 1402, 1404, 1406, 1536, 1538, 1540, 1542, 1544, 1546, 1548, 1550, 1552, 1554, 1556, 1558, 1560, 1562, 1564, 1566, 1568, 1570, 1572, 1574, 1576, 1578, 1580, 1582, 1584, 1586, 1588, 1590, 1592, 1594, 1596, 1598, 1600, 1602, 1604, 1606, 1608, 1610, 1612, 1614, 1616, 1618, 1620, 1622, 1624, 1626, 1628, 1630, 1632, 1634, 1636, 1638, 1640, 1642, 1644, 1646, 1648, 1650, 1652, 1654, 1656, 1658, 1660, 1662

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, 48 bits virtual
Byte Order: Little Endian
CPU(s): 384
On-line CPU(s) list: 0-383
Vendor ID: GenuineIntel
Model name: Intel(R) Xeon(R) 6970E+
CPU family: 6
Model: 221
Thread(s) per core: 1
Core(s) per socket: 192
Socket(s): 2
Stepping: 1
CPU(s) scaling MHz: 27%
CPU max MHz: 3200.0000
CPU min MHz: 800.0000
BogoMIPS: 4600.00

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 pdpe1gb rdtscp lm constant_tsc art arch_perfmon bts rep_good nopl xtopology nonstop_tsc cpuid aperfmp perf 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 intel_ppin 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 rdseed adx smap clflushopt clwb intel_pt sha_ni xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local split_lock_detect user_shstk avx_vnni lam wbnoinvd dtherm ida arat pln pts hwp hwp_act_window hwp_epp hwp_pkg_req vnmi umip pku ospke waitpkg gfni vaes vpclmulqdq tme rdpid bus_lock_detect cldemote movdiri movdir64b

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Platform Notes (Continued)

enqcmd frsm md_clear serialize pconfig arch_lbr ibt flush_lld
arch_capabilities

Virtualization:

VT-x

L1d cache: 12 MiB (384 instances)

L1i cache: 24 MiB (384 instances)

L2 cache: 384 MiB (96 instances)

L3 cache: 960 MiB (2 instances)

NUMA node(s): 6

NUMA node0 CPU(s): 0-63

NUMA node1 CPU(s): 64-127

NUMA node2 CPU(s): 128-191

NUMA node3 CPU(s): 192-255

NUMA node4 CPU(s): 256-319

NUMA node5 CPU(s): 320-383

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;
PBR SB-eIBRS Not affected; BHI Not affected

Vulnerability Srbds: Not affected

Vulnerability Tsx async abort: Not affected

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL	SETS	PHY-LINE	COHERENCY-SIZE
L1d	32K	12M	8	Data	1	64	1	64
L1i	64K	24M	8	Instruction	1	128	1	64
L2	4M	384M	16	Unified	2	4096	1	64
L3	480M	960M	16	Unified	3	491520	1	64

8. numactl --hardware

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

available: 6 nodes (0-5)

node 0 cpus: 0-63

node 0 size: 257498 MB

node 0 free: 256756 MB

node 1 cpus: 64-127

node 1 size: 258030 MB

node 1 free: 256799 MB

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Platform Notes (Continued)

```
node 2 cpus: 128-191
node 2 size: 257992 MB
node 2 free: 257180 MB
node 3 cpus: 192-255
node 3 size: 258030 MB
node 3 free: 257417 MB
node 4 cpus: 256-319
node 4 size: 258030 MB
node 4 free: 257319 MB
node 5 cpus: 320-383
node 5 size: 257951 MB
node 5 free: 257326 MB
node distances:
node  0   1   2   3   4   5
  0:  10  15  17  21  28  26
  1:  15  10  15  23  26  23
  2:  17  15  10  26  23  21
  3:  21  28  26  10  15  17
  4:  23  26  23  15  10  15
  5:  26  23  21  17  15  10
```

9. /proc/meminfo

MemTotal: 1584675796 kB

10. who -r

run-level 3 Sep 7 00:10

11. Systemd service manager version: systemd 254 (254.24+suse.148.g83b9060b6e)

Default Target	Status
multi-user	degraded

12. Failed units, from systemctl list-units --state=failed

UNIT	LOAD	ACTIVE	SUB	DESCRIPTION
* sep5.service	loaded	failed	failed	systemd script to load sep5 driver at boot time

13. Services, from systemctl list-unit-files

STATE	UNIT FILES
enabled	ModemManager YaST2-Firstboot YaST2-Second-Stage apparmor appstream-sync-cache auditd bluetooth chronyd cron display-manager getty@ irqbalance issue-generator kbdsettings klog lvm2-monitor nscd nvme-fc-boot-connections nvme-fc-autoconnect postfix purge-kernels rollback rsyslog sep5 smartd sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny wpa_supplicant

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Platform Notes (Continued)

enabled-runtime systemd-remount-fs
disabled NetworkManager NetworkManager-dispatcher NetworkManager-wait-online accounts-daemon autofs
autoyast-initscripts blk-availability bluetooth-mesh boot-sysctl ca-certificates
chrony-wait console-getty cups cups-browsed debug-shell dmraid-activation dnsmasq ebtables
exchange-bmc-os-info firewallld fsidd gnome-remote-desktop gpm grub2-once haveged ipmi
ipmievdev issue-add-ssh-keys kexec-load ksm kvm_stat lunmask man-db-create multipathd nfs
nfs-blkmap nmb openvpn@ ostree-remount ostree-state-overlay@ rpcbind rpmconfigcheck rsyncd
rtkit-daemon samba-bgqd serial-getty@ smartd_generate_opts smb snmpd snmptrapd
speech-dispatcherd systemd-boot-check-no-failures systemd-conftest
systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd udisks2
update-system-flatpaks upower vncserver@ wpa_supplicant@
indirect pcsd saned@ systemd-userdbd wickedd

14. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-6.4.0-150700.51-default
root=UUID=0ae3eb24-ab4b-4b8e-874e-74e44871a98f
splash=silent
resume=/dev/disk/by-uuid/ee1f2cac-1352-4dc9-8ca2-e927f2abe04e
mitigations=auto
quiet
security=apparmor

15. cpupower frequency-info
analyzing CPU 1:
current policy: frequency should be within 800 MHz and 3.20 GHz.
The governor "performance" may decide which speed to use
within this range.
boost state support:
Supported: yes
Active: yes

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

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SPECrate®2026_int_base = 998

H3C UniServer R4900 G7 (Intel Xeon 6970E+)

SPECrate®2026_int_peak = 1050

CPU2026 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

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Test Date: Sep-2026

Hardware Availability: Jun-2026

Software Availability: Apr-2026

Platform Notes (Continued)

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
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 SUSE Linux Enterprise Server 15 SP7

20. Disk information

SPEC is set to: /home/spec2026

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/nvme0n1p3	xfs	3.0T	670G	2.4T	23%	/home

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

Vendor:	H3C
Product:	R4900 G7 AP
Product Family:	Rack
Serial:	210235A5QEH202606251

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

(Continued on next page)



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Platform Notes (Continued)

determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

Memory:

24x Hynix HMC94CMBRA772N 64 GB 2 rank 8000

23. BIOS

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

BIOS Vendor: American Megatrends International, LLC.

BIOS Version: 7.10.25P94

BIOS Date: 05/28/2026

BIOS Revision: 5.35

Firmware Revision: 3.1

Compiler Version Notes

```
=====  
C      | 708.sqlite_r(base, peak) 714.cpython_r(base, peak) 777.zstd_r(base,  
      | peak)  
-----
```

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2026.0.0 Build 20260331

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```
=====  
C++    | 706.stockfish_r(base, peak) 707.ntest_r(base, peak)  
      | 727.cppcheck_r(base, peak) 753.ns3_r(base, peak)  
-----
```

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2026.0.0 Build 20260331

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```
=====  
C++, C | 710.omnetpp_r(base, peak) 721.gcc_r(base, peak) 723.llvm_r(base,  
      | peak) 729.abc_r(base, peak) 734.vpr_r(base, peak) 735.gem5_r(base,  
      | peak) 750.sealcrypto_r(base, peak)  
-----
```

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Base Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Benchmarks using both C and C++:

icpx icx

Base Optimization Flags

C benchmarks:

-m64 -std=c18 -Wl,-z,muldefs -Wl,-plugin-opt=-inline-threshold=1500
-xclearwaterforest -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4 -fno-strict-aliasing
-L/usr/local/tcmalloc-2.18.1/lib -ltcmalloc_minimal

C++ benchmarks:

-m64 -std=c++17 -Wl,-z,muldefs -Wl,-plugin-opt=-inline-threshold=1500
-xclearwaterforest -O3 -ffp-model=fast -flto -mfpmath=sse
-funroll-loops -qopt-mem-layout-trans=4
-L/usr/local/tcmalloc-2.18.1/lib -ltcmalloc_minimal

Benchmarks using both C and C++:

-m64 -std=c++17 -std=c18 -Wl,-z,muldefs
-Wl,-plugin-opt=-inline-threshold=1500 -xclearwaterforest -O3
-ffp-model=fast -flto -mfpmath=sse -funroll-loops
-qopt-mem-layout-trans=4 -fno-strict-aliasing
-L/usr/local/tcmalloc-2.18.1/lib -ltcmalloc_minimal

Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Benchmarks using both C and C++:

icpx icx



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Hardware Availability: Jun-2026

Software Availability: Apr-2026

Peak Optimization Flags

C benchmarks:

```
-m64 -std=c18 -Wl,-z,muldefs -Wl,-plugin-opt=-inline-threshold=1500
-fprofile-generate(pass 1) -fprofile-use=default.profdata(pass 2)
-xCORE-AVX2(pass 1) -ffp-model=fast -xclearwaterforest(pass 2) -flto
-qopt-mem-layout-trans=4 -O3 -mfpmath=sse -funroll-loops
-fno-strict-aliasing -L/usr/local/tcmalloc-2.18.1/lib
-ltcmalloc_minimal
```

C++ benchmarks:

```
706.stockfish_r: -m64 -std=c++17 -Wl,-z,muldefs
-Wl,-plugin-opt=-inline-threshold=1500
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-ffp-model=fast -xclearwaterforest(pass 2) -flto
-qopt-mem-layout-trans=4 -O3 -mfpmath=sse -funroll-loops
-L/usr/local/tcmalloc-2.18.1/lib -ltcmalloc_minimal
```

707.ntest_r: basepeak = yes

727.cppcheck_r: basepeak = yes

753.ns3_r: Same as 706.stockfish_r

Benchmarks using both C and C++:

```
710.omnetpp_r: -m64 -std=c++17 -std=c18 -Wl,-z,muldefs
-Wl,-plugin-opt=-inline-threshold=1500
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-ffp-model=fast -xclearwaterforest(pass 2) -flto
-qopt-mem-layout-trans=4 -O3 -mfpmath=sse -funroll-loops
-fno-strict-aliasing -L/usr/local/tcmalloc-2.18.1/lib
-ltcmalloc_minimal
```

```
721.gcc_r: -m64 -std=c++17 -std=c18 -Wl,-z,muldefs
-fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX2(pass 1)
-ffp-model=fast -xclearwaterforest(pass 2) -flto
-qopt-mem-layout-trans=4 -O3 -mfpmath=sse -funroll-loops
-fno-strict-aliasing -L/usr/local/tcmalloc-2.18.1/lib
-ltcmalloc_minimal
```

723.llvm_r: Same as 721.gcc_r

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Peak Optimization Flags (Continued)

729.abc_r: basepeak = yes

734.vpr_r: basepeak = yes

735.gem5_r: Same as 710.omnetpp_r

750.sealcrypto_r: basepeak = yes

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

<http://www.spec.org/cpu2026/results/flags/Intel-ic2026-official-linux64-v1.1.html>

http://www.spec.org/cpu2026/results/flags/New_H3C-Platform-Settings-Intel-CWF-RevA.html

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

<http://www.spec.org/cpu2026/results/flags/Intel-ic2026-official-linux64-v1.1.xml>

http://www.spec.org/cpu2026/results/flags/New_H3C-Platform-Settings-Intel-CWF-RevA.xml

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