



SPEC CPU®2026 Integer Rate Result

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New H3C Technologies Co., Ltd.

SPECrate®2026_int_base = 1220

H3C UniServer R4900 G7 (Intel Xeon 6980E+)

SPECrate®2026_int_peak = 1270

CPU2026 License: 9066

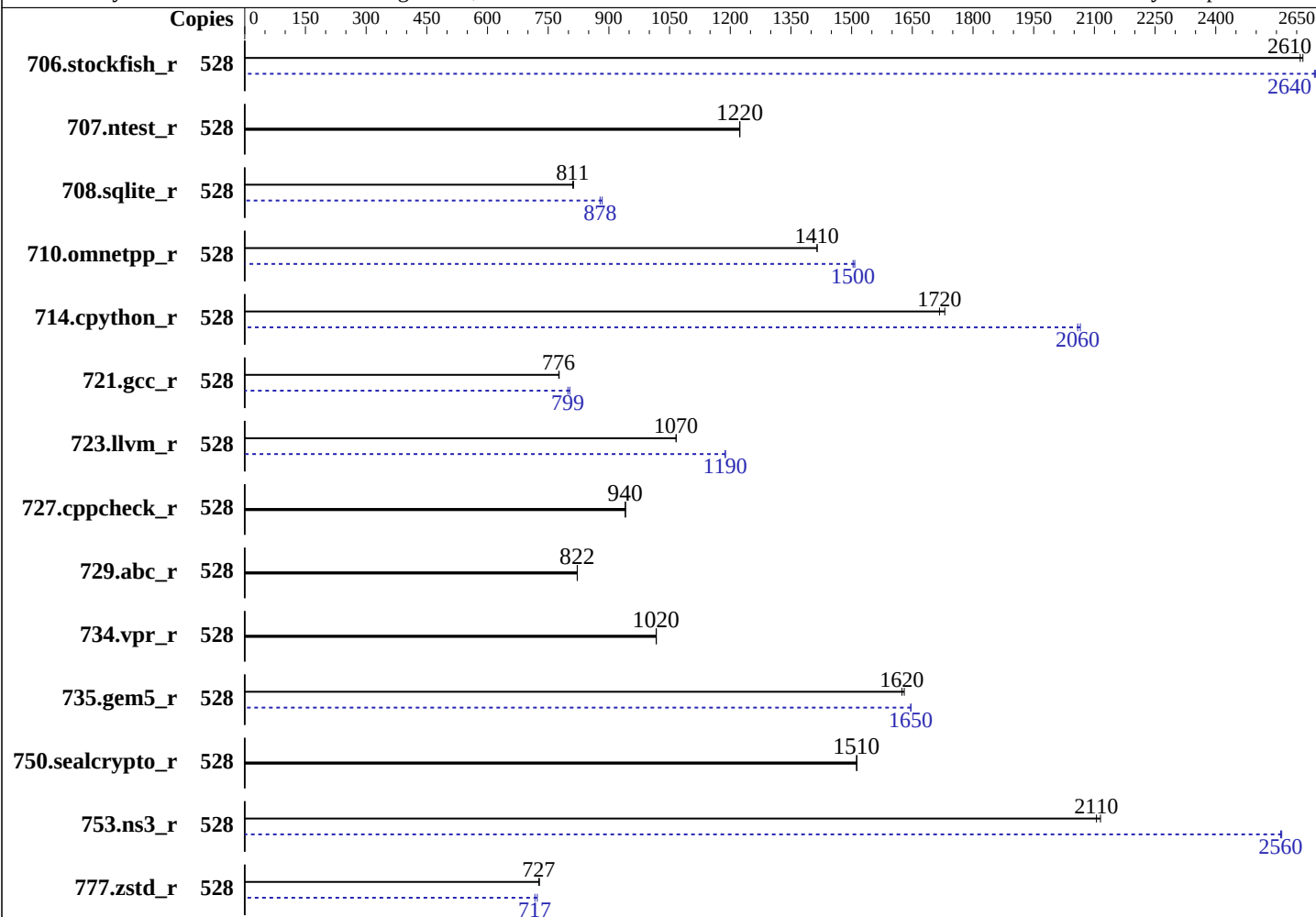
Test Sponsor: New H3C Technologies Co., Ltd.

Tested by: New H3C Technologies Co., Ltd.

Test Date: Aug-2026

Hardware Availability: Jun-2026

Software Availability: Apr-2026



Hardware

CPU Name: Intel Xeon 6980E+
Max MHz: 3200
Nominal: 2100
Enabled: 528 cores, 2 chips
Orderable: 1,2 chips
Cache L1: 64 KB I + 32 KB D on chip per core
L2: 264 MB I+D on chip per chip, 4 MB shared / 4 cores
L3: 528 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	528	254	2620	<u>255</u>	<u>2610</u>			528	<u>252</u>	<u>2640</u>	251	2650		
707.ntest_r	528	255	1220	<u>255</u>	<u>1220</u>			528	255	1220	<u>255</u>	<u>1220</u>		
708.sqlite_r	528	<u>344</u>	<u>811</u>	343	813			528	316	884	<u>317</u>	<u>878</u>		
710.omnetpp_r	528	181	1410	<u>181</u>	<u>1410</u>			528	170	1510	<u>171</u>	<u>1500</u>		
714.cpython_r	528	146	1730	<u>147</u>	<u>1720</u>			528	122	2070	<u>123</u>	<u>2060</u>		
721.gcc_r	528	<u>467</u>	<u>776</u>	466	777			528	451	803	<u>454</u>	<u>799</u>		
723.llvm_r	528	251	1070	<u>251</u>	<u>1070</u>			528	225	1190	<u>225</u>	<u>1190</u>		
727.cppcheck_r	528	<u>202</u>	<u>940</u>	201	941			528	<u>202</u>	<u>940</u>	201	941		
729.abc_r	528	<u>295</u>	<u>822</u>	295	822			528	<u>295</u>	<u>822</u>	295	822		
734.vpr_r	528	239	1020	<u>239</u>	<u>1020</u>			528	239	1020	<u>239</u>	<u>1020</u>		
735.gem5_r	528	<u>158</u>	<u>1620</u>	158	1630			528	<u>156</u>	<u>1650</u>	156	1650		
750.sealcrypto_r	528	187	1510	<u>187</u>	<u>1510</u>			528	187	1510	<u>187</u>	<u>1510</u>		
753.ns3_r	528	153	2120	<u>154</u>	<u>2110</u>			528	<u>126</u>	<u>2560</u>	126	2560		
777.zstd_r	528	467	728	<u>468</u>	<u>727</u>			528	<u>474</u>	<u>717</u>	470	723		

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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 Wed Aug 26 17:50:38 2026

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

Table of contents

-
1. uname -srv
 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 -srv

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

```
17:50:38 up 3:06, 4 users, load average: 0.00, 0.01, 1.21
USER      TTY      FROM          LOGIN@      IDLE   JCPU   PCPU WHAT
root      tty1      -              17:49      14.00s  1.64s  0.02s -bash
root      pts/0    172.17.74.7   16:33      1:15m  0.19s  0.19s -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) 6189059
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) 6189059
virtual memory            (kbytes, -v) unlimited
```

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Platform Notes (Continued)

file locks (-x) unlimited

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 528 -c  
ic2026.0-clearwaterforest-cpu2026-1.0.1-rate-20260429_revB.cfg --define smt-on --define cores=528 --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 528 --configfile  
ic2026.0-clearwaterforest-cpu2026-1.0.1-rate-20260429_revB.cfg --define smt-on --define cores=528 --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/CPU2026.016/temlogs/preenv.intrate.016.0.log --lognum 016.0  
--from_runcpu 2
```

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

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

6. /proc/cpuinfo

```
model name      : Intel(R) Xeon(R) 6980E+
```

```
vendor_id       : GenuineIntel
```

```
cpu family      : 6
```

```
model           : 221
```

```
stepping        : 1
```

```
microcode       : 0x11000120
```

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

```
cpu cores       : 264
```

```
siblings        : 264
```

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

```
528 processors (hardware threads)
```

```
physical id 0: core ids 0-87,128-215,256-343
```

```
physical id 1: core ids 0-87,128-215,256-343
```

```
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, 128, 130, 1  
32, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 256, 258, 260, 262, 26  
4, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 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, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 4  
22, 424, 426, 428, 430, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 55  
4, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606  
, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658,  
660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686
```

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Platform Notes (Continued)

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, 1150, 1152, 1154, 1156, 1158, 1160, 1162, 1164, 1166, 1168, 1170, 1172, 1174, 1176, 1178, 1180, 1182, 1184, 1186, 1188, 1190, 1192, 1194, 1196, 1198, 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, 1408, 1410, 1412, 1414, 1416, 1418, 1420, 1422, 1424, 1426, 1428, 1430, 1432, 1434, 1436, 1438, 1440, 1442, 1444, 1446, 1448, 1450, 1452, 1454, 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, 1664, 1666, 1668, 1670, 1672, 1674, 1676, 1678, 1680, 1682, 1684, 1686, 1688, 1690, 1692, 1694, 1696, 1698, 1700, 1702, 1704, 1706, 1708, 1710

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):	528
On-line CPU(s) list:	0-527
Vendor ID:	GenuineIntel
Model name:	Intel(R) Xeon(R) 6980E+
CPU family:	6
Model:	221
Thread(s) per core:	1
Core(s) per socket:	264
Socket(s):	2
Stepping:	1
CPU(s) scaling MHz:	26%
CPU max MHz:	3200.0000
CPU min MHz:	800.0000
BogoMIPS:	4200.00
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 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 intel_ppin cdp_l2 ssbd mba ibrs ibpb stibp

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Platform Notes (Continued)

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
enqcmd fsrm md_clear serialize pconfig arch_lbr ibt flush_l1d
arch_capabilities

Virtualization:

VT-x
L1d cache: 16.5 MiB (528 instances)
L1i cache: 33 MiB (528 instances)
L2 cache: 528 MiB (132 instances)
L3 cache: 1 GiB (2 instances)

NUMA node(s): 6
NUMA node0 CPU(s): 0-87
NUMA node1 CPU(s): 88-175
NUMA node2 CPU(s): 176-263
NUMA node3 CPU(s): 264-351
NUMA node4 CPU(s): 352-439
NUMA node5 CPU(s): 440-527

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/swaps barriers and __user pointer sanitization

Vulnerability Spectre v2: Mitigation; Enhanced / Automatic IBRS; IBPB conditional; RSB filling;
PBRB-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	16.5M	8	Data	1	64	1	64
L1i	64K	33M	8	Instruction	1	128	1	64
L2	4M	528M	16	Unified	2	4096	1	64
L3	528M	1G	16	Unified	3	540672	1	64

8. numactl --hardware

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

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Platform Notes (Continued)

available: 6 nodes (0-5)

node 0 cpus: 0-87

node 0 size: 257364 MB

node 0 free: 256109 MB

node 1 cpus: 88-175

node 1 size: 258024 MB

node 1 free: 257339 MB

node 2 cpus: 176-263

node 2 size: 258024 MB

node 2 free: 255041 MB

node 3 cpus: 264-351

node 3 size: 258024 MB

node 3 free: 257046 MB

node 4 cpus: 352-439

node 4 size: 257986 MB

node 4 free: 257382 MB

node 5 cpus: 440-527

node 5 size: 257870 MB

node 5 free: 256008 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: 1584430020 kB

10. who -r

run-level 3 Aug 26 14:46

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
----------------	--------	--------	--------	---

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Platform Notes (Continued)

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-f-autoconnect postfix purge-kernels rollback rsyslog sep5 smartd sshd systemd-pstore wicked wickedd-auto4 wickedd-dhcp4 wickedd-dhcp6 wickedd-nanny wpa_supplicant
enabled-runtime	systemd-remount-fs
disabled	NetworkManager NetworkManager-dispatcher NetworkManager-wait-online accounts-daemon autofs autostart-initscripts blk-availability bluetooth-mesh boot-sysctl ca-certificates chrony-wait console-getty cups cups-browsed debug-shell dmraid-activation dnsmasq ebttables exchange-bmc-os-info firewallld fsidd gnome-remote-desktop gpm grub2-once haveged ipmi ipmievad 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-confext systemd-network-generator systemd-sysext systemd-time-wait-sync systemd-timesyncd udisks2 update-system-flatpaks upower vncserver@ wpa_supplicant@
indirect	pcscd 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 195:
  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
```

(Continued on next page)



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H3C UniServer R4900 G7 (Intel Xeon 6980E+)

SPECrate®2026_int_peak = 1270

CPU2026 License: 9066

Test Sponsor: New H3C Technologies Co., Ltd.

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Test Date: Aug-2026

Hardware Availability: Jun-2026

Software Availability: Apr-2026

Platform Notes (Continued)

```
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
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	560G	2.5T	19%	/home

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

```
Vendor:      H3C
Product:     R4900 G7 AP
```

(Continued on next page)



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Platform Notes (Continued)

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 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

Copyright (C) 1985-2026 Intel Corporation. All rights reserved.

```
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)
```

(Continued on next page)



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Tested by: New H3C Technologies Co., Ltd.

Test Date: Aug-2026

Hardware Availability: Jun-2026

Software Availability: Apr-2026

Compiler Version Notes (Continued)

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



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Test Date: Aug-2026

Hardware Availability: Jun-2026

Software Availability: Apr-2026

Peak Compiler Invocation

C benchmarks:

icx

C++ benchmarks:

icpx

Benchmarks using both C and C++:

icpx icx

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
```

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Peak Optimization Flags (Continued)

710.omnetpp_r (continued):

-ltcmalloc_minimal

721.gcc_r: -m64 -std=c++17 -std=c18 -Wl, -z, muldefs

-fprofile-generate(pass 1)

-fprofile-use=default.profddata(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

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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