Hewlett-Packard Company

ProLiant DL380 Gen9
(2.30 GHz, Intel Xeon E5-2650 v3)

**SPECint_rate2006 = Not Run**

**SPECint_rate_base2006 = 826**

| CPU License | 3 |
| Test Sponsor | Hewlett-Packard Company |
| Tested by | Hewlett-Packard Company |
| Test Date | Apr-2015 |
| Hardware Availability | Aug-2014 |
| Software Availability | Jan-2015 |

### Hardware

**CPU Name:** Intel Xeon E5-2650 v3

**CPU Characteristics:** Intel Turbo Boost Technology up to 3.00 GHz

**CPU MHz:** 2300

**FPU:** Integrated

**CPU(s) enabled:** 20 cores, 2 chips, 10 cores/chip, 2 threads/core

**CPU(s) orderable:** 2 chips

**Primary Cache:** 32 KB I + 32 KB D on chip per core

**Secondary Cache:** 256 KB I+D on chip per core

**L3 Cache:** 25 MB I+D on chip per chip

**Other Cache:** None

**Memory:** 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)

**Disk Subsystem:** 1 x 300 GB 15 K SAS, RAID 0

**Other Hardware:** None

### Software

**Operating System:** SUSE Linux Enterprise Server 12 (x86_64)

**Compiler:** C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux

**Auto Parallel:** No

**File System:** xfs

**System State:** Run level 3 (multi-user)

**Base Pointers:** 32-bit

**Peak Pointers:** 32/64-bit

**Other Software:** Microquill SmartHeap V10.0
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Results Table

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</tbody>
</table>

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 with:
  echo always > /sys/kernel/mm/transparent_hugepage/enabled
Filesystem page cache cleared with:
  echo 1 > /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
  numactl --interleave=all runspec <etc>

Platform Notes

BIOS Configuration:
HP Power Profile set to Custom
HP Power Regulator to HP Static High Performance Mode
Minimum Processor Idle Power Core State set to C6 State
Minimum Processor Idle Power Package State set to No Package State
Collaborative Power Control set to Disabled
QPI Snoop Configuration set to Early Snoop
Thermal Configuration set to Maximum Cooling
Processor Power and Utilization Monitoring set to Disabled
Memory Refresh Rate set to 1x Refresh
Memory Patrol Scrubbing set to Disabled

Continued on next page
SPEC CINT2006 Result

Hewlett-Packard Company
ProLiant DL380 Gen9
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SPECint_rate2006 =  Not Run
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CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
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Platform Notes (Continued)

Sysinfo program /spec/cpu/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on pl190 Wed Apr 1 20:35:39 2015

This section contains SUT (System Under Test) info as seen by
some common utilities. To remove or add to this section, see:
http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E5-2650 v3 @ 2.30GHz
  2 "physical id"s (chips)
  40 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
cautions.)
cpu cores : 5
siblings : 10
physical 0: cores 0 1 2 3 4 8 9 10 11 12
physical 1: cores 0 1 2 3 4 8 9 10 11 12
cache size : 12800 KB

From /proc/meminfo
MemTotal: 264552660 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
SuSE-release:
  SUSE Linux Enterprise Server 12 (x86_64)
  VERSION = 12
  PATCHLEVEL = 0
  # This file is deprecated and will be removed in a future service pack or
  release.
  # Please check /etc/os-release for details about this release.
  os-release:
    NAME="SLES"
    VERSION="12"
    VERSION_ID="12"
    PRETTY_NAME="SUSE Linux Enterprise Server 12"
    ID="sles"
    ANSI_COLOR="0;32"
    CPE_NAME="cpe:/o:suse:sles:12"

uname -a:
  Linux pl190 3.12.28-4-default #1 SMP Thu Sep 25 17:02:34 UTC 2014 (9879bd4)
x86_64 x86_64 x86_64 GNU/Linux
run-level 3 Mar 30 08:09

SPEC is set to: /spec/cpu
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/vg_spec-lv_spec xfs 280G 37G 243G 14% /spec
Continued on next page
<table>
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### Platform Notes (Continued)

Warning: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS HP P89 08/26/2014  
Memory:  
16x HP 752369-081 16 GB 2 rank 2133 MHz  
8x UNKNOWN NOT AVAILABLE

(End of data from sysinfo program)

Regarding the sysinfo display about the memory installed, the correct amount of memory is 256 GB and the dmidecode description should have one line reading as:  
16x HP 752369-081 16 GB 2 rank 2133 MHz

### General Notes

Environment variables set by runspec before the start of the run:  
LD_LIBRARY_PATH = "/spec/cpu/libs/32:/spec/cpu/libs/64:/spec/cpu/sh"

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0

### Base Compiler Invocation

C benchmarks:  
`icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32`

C++ benchmarks:  
`icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32`

### Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32  
462.libquantum: -DSPEC_CPU_LINUX  
483.xalancbmk: -DSPEC_CPU_LINUX

### Base Optimization Flags

C benchmarks:  
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

Continued on next page
## SPEC CINT2006 Result

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### Hardware Details
- **CPU2006 license:** 3
- **Test sponsor:** Hewlett-Packard Company
- **Tested by:** Hewlett-Packard Company
- **Test date:** Apr-2015
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### Base Optimization Flags (Continued)

**C++ benchmarks:**
- -xCORE-AVX2
- -ipo
- -O3
- -no-prec-div
- -opt-prefetch
- -Wl,-z,muldefs
- -L/sh
- -lsmartheap

### Base Other Flags

**C benchmarks:**

403.gcc: -Dalloca=_alloca

---

The flags files that were used to format this result can be browsed at:
- [http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html](http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html)

You can also download the XML flags sources by saving the following links:
- [http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml](http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml)
- [http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-HSW-revE.xml](http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-HSW-revE.xml)

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