Spec has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.

**Copies**

- 400.perlbench
- 401.bzip2
- 403.gcc
- 429.mcf
- 445.gobmk
- 456.hmmer
- 458.sjeng
- 462.libquantum
- 464.h264ref
- 471.omnetpp
- 473.astar
- 483

**Hardware**

- **CPU Name:** Intel Xeon E5-2637 v3
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.70 GHz
- **CPU MHz:** 3500
- **FPU:** Integrated
- **CPU(s) enabled:** 8 cores, 2 chips, 4 cores/chip, 2 threads/core
- **Primary Cache:** 32 KB I + 32 KB D on chip per core

**Software**

- **Operating System:** Red Hat Enterprise Linux Server release 7.0 (Maipo)
- **Kernel:** 3.10.0-123.el7.x86_64
- **Compiler:** C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux
- **File System:** xfs
- **System State:** Run level 3 (multi-user)
Hewlett-Packard Company
Proliant BL460c Gen9
(3.50 GHz, Intel Xeon E5-2637 v3)

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

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Results Table

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</tr>
</tbody>
</table>

Submit Notes

The numacll mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numacll commands to bind each copy to a specific processor. For details, please see the config file.
SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.

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
QPI Snoop Configuration set to Early Snoop
Thermal Configuration set to Maximum Cooling
Collaborative Power Control set to Disabled
Processor Power and Utilization Monitoring set to Disabled
Memory Double Refresh Rate set to 1x Refresh

Sysinfo program /cpu2006/config/sysinfo.rev6914
$Rev: 8614 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
running on W-bl460c_gen9-VP2.1 Wed Nov 19 11:21:29 2014

... 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 E5-2637 v3 @ 3.50GHz
    2 "physical id"s (chips)
    16 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
  cpu cores : 4
  siblings : 8
SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.

Platform Notes (Continued)

physical 0: cores 0 1 4 5  
cache size : 15360 KB

From /proc/meminfo
    MemTotal:   263846220 kB
    HugePages_Total:
    Hugepagesize:  2048 kB

From /etc/*release* /etc/*version*
    os-release:
        NAME="Red Hat Enterprise Linux Server"
        VERSION="7.0 (Maipo)"
        ID="rhel"
        ID_LIKE="fedora"
        VERSION_ID="7.0"
        PRETTY_NAME="Red Hat Enterprise Linux Server 7.0 (Maipo)"
        ANSI_COLOR="0;31"
        CPE_NAME="cpe:/o:redhat:enterprise_linux:7.0:GA:server"
        redhat-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
        system-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
        system-release-cpe: cpe:/o:redhat:enterprise_linux:7.0:ga:server

uname -a:
    Linux W-bl460c_gen9-VP2.1 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57 EDT 2014 x86_64 x86_64 x86_64 GNU/Linux
    run-level 3 Nov 19 11:14

SPEC is set to: /cpu2006

Filesystem   Type  Size  Used Avail Use% Mounted on
/dev/sda4    xfs  277G  7.7G  270G  3%  /

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.
SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.

Platform Notes (Continued)

BIOS: HP I36 08/26/2014
Memory:
16x HP NOT AVAILABLE 16 GB 2 rank 2133 MHz

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/cpu2006/libs/32:/cpu2006/libs/64:/cpu2006/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:
ic++ -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
-opt-mem-layout-trans=3
SPEC CINT2006 Result

Hewlett-Packard Company
Proliant BL460c Gen9
(3.50 GHz, Intel Xeon E5-2637 v3)

SPECint_rate2006 = NC
SPECint_rate_base2006 = NC

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: Nov-2014
Hardware Availability: Sep-2014
Software Availability: Sep-2014

SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.

Base Optimization Flags (Continued)

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-pref-div -opt-prefetch
-opt-mem-layout-trans=3 -f1,-f,mutate -L/sh -lsmartheap

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
400.perlbench: icc -m64
401.xip32: icc -m64
456.hmmer: icc -m64
458.sjeng: icc -m64

C++ benchmarks:
icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
Hewlett-Packard Company

Proliant BL460c Gen9
(3.50 GHz, Intel Xeon E5-2637 v3)

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

SPEC has determined that this result is not in compliance with the SPEC OSG Guidelines for General Availability and the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a memory configuration that is not supported by Hewlett-Packard with the given processor configuration.

### Peak Portability Flags

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### Peak Optimization Flags

**C benchmarks:**

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<td>-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -auto-ilp</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -opt-mem-layout-trans=3 -auto-ilp32 -ansi-alias</td>
</tr>
<tr>
<td>403.gcc</td>
<td>-xCORE-AVX2 -ipo -O3 -no-prec-div</td>
</tr>
<tr>
<td>426.mcf: basepeak = yes</td>
<td>-xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias -opt-mem-layout-trans=3</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>-xCORE-AVX2 -ipo -O3 -no-prec-div -unroll12 -auto-ilp32</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto-ilp32</td>
</tr>
<tr>
<td>462.libquantum: basepeak = yes</td>
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</tbody>
</table>
### SPEC CINT2006 Result

**Hewlett-Packard Company**

Proliant BL460c Gen9 (3.50 GHz, Intel Xeon E5-2637 v3)

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**CPU2006 license:** 3  
**Test date:** Nov-2014  
**Test sponsor:** Hewlett-Packard Company  
**Tested by:** Hewlett-Packard Company

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### Peak Optimization Flags (Continued)

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<tr>
<td>464.h264ref: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -ansi-alias -unroll2</td>
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### Peak Other Flags

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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**Hewlett-Packard Company**

Proliant BL460c Gen9  
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- **Hardware Availability:** Sep-2014  
- **Software Availability:** Sep-2014

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For questions about this result, please contact the tester.  
For other inquiries, please contact webmaster@spec.org.

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