Hewlett-Packard Company
ProLiant DL380p Gen8
(2.40 GHz, Intel Xeon E5-2695 v2)

SPECint\textsuperscript{2006} = 55.1
SPECint\textsubscript{base2006} = 51.1

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

CPU Name: Intel Xeon E5-2695 v2
CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz
CPU MHz: 2400
FPU: Integrated
CPU(s) enabled: 24 cores, 2 chips, 12 cores/chip
CPU(s) orderable: 1.2 chip
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 30 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (16 x 16 GB 2Rx4 PC3-14900R-13, ECC)
Disk Subsystem: 1 x 300 GB 10 K SAS, RAID 0
Other Hardware: None

Operating System: SUSE Linux Enterprise Server 11 (x86_64) SP3
Kernel 3.0.76-0.11-default
Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
Auto Parallel: Yes
File System: ext3
System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V10.0
SPEC CINT2006 Result

Hewlett-Packard Company
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SPECint2006 = 55.1
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Results Table

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<th>Ratio</th>
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</tr>
</tbody>
</table>

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

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"
Reclaim mode enabled with:
  echo 1 > /proc/sys/vm/zone_reclaim_mode
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
rspec command invoked through numactl i.e.:
numactl --localalloc runspec <etc>
Disabled unused Linux services through "stop_services.sh" before running.

Platform Notes

BIOS Configuration:
  Intel Hyperthreading Options set to Disabled
HP Power Profile set to Maximum Performance
Minimum Processor Idle Power Core State set to C1E
Minimum Processor Idle Power Package State set to C6 (retention)
Memory Power Savings Mode set to Maximum Performance
Thermal Configuration set to Maximum Cooling
Collaborative Power Control set to Disabled
Dynamic Power Capping Functionality set to Disabled
Processor Power and Utilization Monitoring set to Disabled
Memory Refresh Rate set to 1x

Sysinfo program /cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191

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SPEC CINT2006 Result

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SPECint2006 = 55.1
SPECint_base2006 = 51.1

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
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Platform Notes (Continued)

running on dl380p-gen8-0s9 Thu Nov  7 21:52:49 2013

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 E5-2695 v2 @ 2.40GHz
  2 "physical id"s (chips)
  24 "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 : 12
  siblings : 12
  physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
  physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13
  cache size : 30720 KB

From /proc/meminfo
MemTotal:       264512840 kB
HugePages_Total:       0
Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 11 (x86_64)

From /etc/*release* /etc/*version*
SuSE-release:
  SUSE Linux Enterprise Server 11 (x86_64)
  VERSION = 11
  PATCHLEVEL = 3

uname -a:
  Linux dl380p-gen8-0s9 3.0.76-0.11-default #1 SMP Fri Jun 14 08:21:43 UTC 2013
  (ccab990) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Nov 7 21:24 last=S

SPEC is set to: /cpu2006

Filesystem     Type  Size  Used Avail Use% Mounted on
/dev/sda1      ext3  135G   16G  118G  12% /

Additional information from dmidecode:
  BIOS HP P70 09/08/2013
  Memory:
    16x HP 712383-081 16 GB 1866 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:
Continued on next page
Hewlett-Packard Company

ProLiant DL380p Gen8
(2.40 GHz, Intel Xeon E5-2695 v2)

SPECint2006 = 55.1
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CPU2006 license: 3
Test date: Nov-2013
Test sponsor: Hewlett-Packard Company
Hardware Availability: Sep-2013
Tested by: Hewlett-Packard Company
Software Availability: Sep-2013

Platform Notes (Continued)

16x HP 712383-081 16 GB 1866 MHz
Regarding the sysinfo display about the CPU cores from /proc/cpuinfo, the correct mapping should display as cores 0 through 11. The mapping should read as the following:
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11

General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/cpu2006/libs/32:/cpu2006/libs/64:/cpu2006/sh"
OMP_NUM_THREADS = "24"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.4

Base Compiler Invocation

C benchmarks:
  icc -m64

C++ benchmarks:
  icpc -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
  -XSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

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Hewlett-Packard Company
ProLiant DL380p Gen8
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| SPECint2006 | 55.1 |
| SPECint_base2006 | 51.1 |

**CPU2006 license:** 3  
**Test sponsor:** Hewlett-Packard Company  
**Test date:** Nov-2013  
**Hardware Availability:** Sep-2013  
**Tested by:** Hewlett-Packard Company  
**Software Availability:** Sep-2013

### Base Optimization Flags (Continued)

C++ benchmarks:
- `-xsSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32`
- `-Wl,-z,muldefs -L/sh -lsmartheap64`

### Base Other Flags

C benchmarks:
- `403.gcc: -Dalloca=_alloca`

### Peak Compiler Invocation

C benchmarks (except as noted below):
- `icc -m64`

- `400.perlbench: icc -m32`
- `445.gobmk: icc -m32`
- `464.h264ref: icc -m32`

C++ benchmarks (except as noted below):
- `icpc -m64`

- `471.omnetpp: icpc -m32`

### Peak Portability Flags

- `400.perlbench: -DSPEC_CPU_LINUX_IA32`
- `401.bzip2: -DSPEC_CPU_LP64`
- `403.gcc: -DSPEC_CPU_LP64`
- `429.mcf: -DSPEC_CPU_LP64`
- `456.hmmer: -DSPEC_CPU_LP64`
- `458.sjeng: -DSPEC_CPU_LP64`
- `462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`
- `473.astar: -DSPEC_CPU_LP64`
- `483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`

### Peak Optimization Flags

C benchmarks:

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

Peak Optimization Flags (Continued)

400.perlbnej: -xSSE4.2 (pass 2) -prof-gen(pass 1) -ipo(pass 2)
   -o3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
   -opt-prefetch -ansi-alias

401.bzip2: -xSSE4.2 (pass 2) -prof-gen(pass 1) -ipo(pass 2)
   -o3(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32
   -opt-prefetch -ansi-alias

403.gcc: -xSSE4.2 -ipo -o3 -no-prec-div -inline-calloc
   -opt-malloc-options=3 -auto-ilp32

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2 (pass 2) -prof-gen(pass 1) -prof-use(pass 2)
   -ansi-alias

456.hmmer: -xSSE4.2 -ipo -o3 -no-prec-div -unroll2 -auto-ilp32
   -ansi-alias

458.sjeng: -xSSE4.2 (pass 2) -prof-gen(pass 1) -ipo(pass 2)
   -o3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
   -unroll4

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2 (pass 2) -prof-gen(pass 1) -ipo(pass 2)
   -o3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
   -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2 (pass 2) -prof-gen(pass 1) -ipo(pass 2)
   -o3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
   -opt-ra-region-strategy=block
   -Wl,-z,muldefs -L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca
Hewlett-Packard Company

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Software Availability: Sep-2013

The flags files that were used to format this result can be browsed at:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.html
http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-revB.20131009.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml
http://www.spec.org/cpu2006/flags/HP-Platform-Flags-Intel-V1.2-revB.20131009.xml

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For other inquiries, please contact webmaster@spec.org.

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