Lenovo Group Limited
Lenovo System x3250 M6
(2.90 GHz, Intel Xeon E3-1260L v5)

SPECint®2006 = 74.1
SPECint_base2006 = 71.7

CPU2006 license: 9017
Test sponsor: Lenovo Group Limited
Tested by: Lenovo Group Limited

CPU Name: Intel Xeon E3-1260L v5
CPU Characteristics: Intel Turbo Boost Technology up to 3.90 GHz
CPU MHz: 2900
FPU: Integrated
CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
CPU(s) orderable: 1 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: 8 MB I+D on chip per chip
Other Cache: None
Memory: 16 GB (2 x 8 GB 2Rx8 PC4-2133P-E)
Disk Subsystem: 1 x 800 GB SATA SSD
Other Hardware: None

Operating System: SUSE Linux Enterprise Server 12 SP1 (x86_64)
Compiler: C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux
Auto Parallel: Yes
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V10.2
Lenovo Group Limited

Lenovo System x3250 M6
(2.90 GHz, Intel Xeon E3-1260L v5)

SPECint2006 = 74.1
SPECint_base2006 = 71.7

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>195</td>
<td>50.2</td>
<td>194</td>
<td>50.3</td>
<td>195</td>
<td>50.2</td>
<td>176</td>
<td>55.4</td>
<td>176</td>
<td>55.4</td>
<td>177</td>
<td>55.3</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>317</td>
<td>30.8</td>
<td>317</td>
<td>30.4</td>
<td>316</td>
<td>30.5</td>
<td>313</td>
<td>30.8</td>
<td>313</td>
<td>30.9</td>
<td>313</td>
<td>30.8</td>
</tr>
<tr>
<td>403.mcf</td>
<td>162</td>
<td>49.8</td>
<td>161</td>
<td>49.9</td>
<td>162</td>
<td>49.8</td>
<td>159</td>
<td>50.7</td>
<td>158</td>
<td>50.9</td>
<td>159</td>
<td>50.7</td>
</tr>
<tr>
<td>429.gcc</td>
<td>109</td>
<td>83.3</td>
<td>108</td>
<td>84.8</td>
<td>110</td>
<td>83.0</td>
<td>110</td>
<td>82.9</td>
<td>109</td>
<td>84.0</td>
<td>108</td>
<td>84.1</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>301</td>
<td>34.8</td>
<td>302</td>
<td>34.8</td>
<td>302</td>
<td>34.7</td>
<td>313</td>
<td>33.5</td>
<td>313</td>
<td>33.5</td>
<td>313</td>
<td>33.5</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>91.5</td>
<td>102</td>
<td>91.6</td>
<td>102</td>
<td>92.0</td>
<td>101</td>
<td>91.5</td>
<td>102</td>
<td>91.6</td>
<td>102</td>
<td>92.0</td>
<td>101</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>307</td>
<td>39.5</td>
<td>307</td>
<td>39.4</td>
<td>307</td>
<td>39.4</td>
<td>303</td>
<td>40.0</td>
<td>303</td>
<td>40.0</td>
<td>303</td>
<td>39.9</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>9.41</td>
<td>2200</td>
<td>9.43</td>
<td>2200</td>
<td>9.43</td>
<td>2200</td>
<td>9.41</td>
<td>2200</td>
<td>9.43</td>
<td>2200</td>
<td>9.43</td>
<td>2200</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>307</td>
<td>72.0</td>
<td>308</td>
<td>72.0</td>
<td>307</td>
<td>72.1</td>
<td>307</td>
<td>72.0</td>
<td>308</td>
<td>72.0</td>
<td>307</td>
<td>72.1</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>186</td>
<td>33.6</td>
<td>186</td>
<td>33.2</td>
<td>188</td>
<td>33.2</td>
<td>147</td>
<td>42.4</td>
<td>147</td>
<td>42.5</td>
<td>147</td>
<td>42.5</td>
</tr>
<tr>
<td>473.astar</td>
<td>170</td>
<td>41.3</td>
<td>169</td>
<td>41.5</td>
<td>170</td>
<td>41.4</td>
<td>171</td>
<td>41.2</td>
<td>170</td>
<td>41.4</td>
<td>170</td>
<td>41.3</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>72.9</td>
<td>94.7</td>
<td>73.1</td>
<td>94.4</td>
<td>72.8</td>
<td>94.8</td>
<td>69.8</td>
<td>98.8</td>
<td>69.8</td>
<td>98.9</td>
<td>69.9</td>
<td>98.8</td>
</tr>
</tbody>
</table>

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

Submit Notes

The config file option 'submit' was used.

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

Platform Notes

BIOS Configuration:
Operating Modes set to Maximum Performance
Hyper-Threading set to Disabled
Sysinfo program /home/cpu2006-1.2-ic16.0/config/sysinfo.rev6914
$Rev: 6914 $ $Date:: 2014-06-25 $3fbbb8667b5a285932ceab81e28219e1
running on x3250-02 Tue Nov 29 03:07:14 2016

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 E3-1260L v5 @ 2.90GHz
1 "physical id"s (chips)
4 "processors"
core, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with
Continued on next page
Lenovo Group Limited

Lenovo System x3250 M6
(2.90 GHz, Intel Xeon E3-1260L v5)

SPECint2006 = 74.1
SPECint_base2006 = 71.7

CPU2006 license: 9017
Test sponsor: Lenovo Group Limited
Tested by: Lenovo Group Limited

Platform Notes (Continued)

caution.)
cpu cores : 4
siblings : 4
physical 0: cores 0 1 2 3
cache size : 8192 KB

From /proc/meminfo
MemTotal: 16421272 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release*/etc/*version*
SuSE-release:
   SUSE Linux Enterprise Server 12 (x86_64)
   VERSION = 12
   PATCHLEVEL = 1
   # 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-SP1"
      VERSION_ID="12.1"
      PRETTY_NAME="SUSE Linux Enterprise Server 12 SP1"
      ID="sles"
      ANSI_COLOR="0;32"
      CPE_NAME="cpe:/o:suse:sles:12:sp1"

uname -a:
   Linux x3250-02 3.12.49-11-default #1 SMP Wed Nov 11 20:52:43 UTC 2015
   (8d714a0) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Nov 29 02:47

SPEC is set to: /home/cpu2006-1.2-ic16.0
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda3 xfs 691G 4.2G 687G 1% /home

Additional information from dmidecode:

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 LENOVO -[M3E107GUS-1.20]- 10/28/2016
Memory:
   2x NO DIMM Unknown
   2x Samsung M391A1G43EB1-CPB 8 GB 2 rank 2133 MHz

(End of data from sysinfo program)
## SPEC CINT2006 Result

**Lenovo Group Limited**

Lenovo System x3250 M6  
(2.90 GHz, Intel Xeon E3-1260L v5)  

<table>
<thead>
<tr>
<th>CPU2006 license:</th>
<th>9017</th>
<th>Test date:</th>
<th>Nov-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test sponsor:</td>
<td>Lenovo Group Limited</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tested by:</td>
<td>Lenovo Group Limited</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPECint2006 =</td>
<td>74.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPECint_base2006 =</td>
<td>71.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test date:</td>
<td>Nov-2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>Apr-2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Mar-2016</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### General Notes

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

- `KMP_AFFINITY = "granularity=fine,scatter"`
- `LD_LIBRARY_PATH = "/home/cpu2006-1.2-ic16.0/libs/32:/home/cpu2006-1.2-ic16.0/libs/64:/home/cpu2006-1.2-ic16.0/sh"`
- `OMP_NUM_THREADS = "4"`

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1

### Base Compiler Invocation

- **C benchmarks:**
  - `icc -m64`

- **C++ benchmarks:**
  - `icpc -m64`

### Base Portability Flags

- **C benchmarks:**
  - `-DSPEC_CPU_LP64`
  - `-DSPEC_CPU_LINUX_X64`

- **C++ benchmarks:**
  - `-DSPEC_CPU_LP64`

### Base Optimization Flags

- **C benchmarks:**
  - `-xCORE-AVX2`
  - `-ipo`
  - `-O3`
  - `-no-prec-div`
  - `-parallel`
  - `-opt-prefetch`
  - `-auto-p32`

- **C++ benchmarks:**
  - `-xCORE-AVX2`
  - `-ipo`
  - `-O3`
  - `-no-prec-div`
  - `-opt-prefetch`
  - `-auto-p32`

- `-Wl,-z,muldefs -L/sh -lsmartheap64`

### Base Other Flags

- **C benchmarks:**

---

Continued on next page
Lenovo Group Limited
Lenovo System x3250 M6
(2.90 GHz, Intel Xeon E3-1260L v5)

SPECint2006 = 74.1
SPECint_base2006 = 71.7

CPU2006 license: 9017
Test sponsor: Lenovo Group Limited
Tested by: Lenovo Group Limited

Test date: Nov-2016
Hardware Availability: Apr-2016
Software Availability: Mar-2016

Base Other Flags (Continued)

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

```bash
icc -m64
```

400.perlbench: `icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin`

445.gobmk: `icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin`

C++ benchmarks (except as noted below):

```bash
icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin
```

473.astar: `icpc -m64`

Peak Portability Flags

400.perlbench: `-D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32`
401.bzip2: `-DSPEC_CPU_LP64`
403.gcc: `-DSPEC_CPU_LP64`
429.mcf: `-DSPEC_CPU_LP64`
445.gobmk: `-D_FILE_OFFSET_BITS=64`
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: `-D_FILE_OFFSET_BITS=64`
473.astar: `-DSPEC_CPU_LP64`
483.xalancbmk: `-D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

```bash
400.perlbench: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass 1
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -opt-prefetch
-ansi-alias
```

401.bzip2: `-xCORE-AVX2(pass 2) -prof-gen:threadsafepass 1
-ipo(pass 2) -O3(pass 2) -no-prec-div
-par-num-threads=1(pass 1) -prof-use(pass 2) -auto-ilp32
-opt-prefetch -ansi-alias`
Lenovo Group Limited

Lenovo System x3250 M6  
(2.90 GHz, Intel Xeon E3-1260L v5)

SPECint2006 = 74.1
SPECint_base2006 = 71.7

CPU2006 license: 9017  
Test date: Nov-2016
Test sponsor: Lenovo Group Limited  
Hardware Availability: Apr-2016
Tested by: Lenovo Group Limited  
Software Availability: Mar-2016

Peak Optimization Flags (Continued)

403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc  
-.opt-malloc-options=3 -auto-ilp32

429.mcf: -xCORE-AVX2 -ipo -O3 -no-prec-div -parallel  
-Opt-prefetch -auto-p32

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)  
-prof-use(pass 2) -par-num-threads=1(pass 1) -ansi-alias

456.hmmer: basepeak = yes

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)  
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)  
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll4

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)  
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)  
-par-num-threads=1(pass 1) -prof-use(pass 2)  
-opt-ra-region-strategy=block -ansi-alias  
-Wl,-z,muldefs -L/sh -lsmartheap

473.astar: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch  
-auto-p32 -Wl,-z,muldefs -L/sh -lsmartheap64

483.xalancbmk: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch  
-ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Other Flags

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.html
http://www.spec.org/cpu2006/flags/Lenovo-Platform-Settings-V1.2-BDW-revC.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/Lenovo-Platform-Settings-V1.2-BDW-revC.xml
# SPEC CINT2006 Result

## Lenovo Group Limited

**Lenovo System x3250 M6**  
*(2.90 GHz, Intel Xeon E3-1260L v5)*

<table>
<thead>
<tr>
<th>CPU2006 license:</th>
<th>9017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test sponsor:</td>
<td>Lenovo Group Limited</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Lenovo Group Limited</td>
</tr>
</tbody>
</table>

**SPECint2006 =** 74.1  
**SPECint_base2006 =** 71.7

**CPU2006 license:** 9017  
**Test date:** Nov-2016  
**Hardware Availability:** Apr-2016  
**Test sponsor:** Lenovo Group Limited  
**Software Availability:** Mar-2016  
**Tested by:** Lenovo Group Limited

---

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.2.  
Originally published on 27 December 2016.