SPEC® CINT2006 Result
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Acer Incorporated

Acer AW2000h-AW170h F2 (Intel Xeon E5-2690)

$SPECint^®\_rate2006 = 679$

$SPECint\_rate\_base2006 = 649$

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Sep-2012

Hardware Availability: Sep-2012

Software Availability: Dec-2011

Copies 0 150 300 450 600 750 900 1050 1250 1450 1650 1850 2050 2250 2450 2650 2850 3050 3250 3450 3650 3850 4150

Benchmark	Copies	Peak	Base
400.perlbench	32 / 32	584	506
401.bzip2	32 / 32	369	355
403.gcc	32 / 32	511	515
429.mcf	32		929
445.gobmk	32 / 32	539	518
456.hmmer	32 / 32	963	805
458.sjeng	32 / 32	547	505
462.libquantum	32		4140
464.h264ref	32 / 32	878	849
471.omnetpp	32 / 32	363	345
473.astar	32		378
483.xalancbmk	32		668

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Hardware

CPU Name: Intel Xeon E5-2690

CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz

CPU MHz: 2900

FPU: Integrated

CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core

CPU(s) orderable: 1,2 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: 20 MB I+D on chip per chip

Other Cache: None

Memory: 128 GB (8 x 16 GB 2Rx4 PC3-12800R-11, ECC)

Disk Subsystem: 1 x 500 GB SATA, 7200 RPM

Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.2 (Santiago)
2.6.32-220.el6.x86_64

Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux

Auto Parallel: No

File System: ext4

System State: Run level 3 (mulit-user)

Base Pointers: 32-bit

Peak Pointers: 32/64-bit

Other Software: Microquill SmartHeap V9.01

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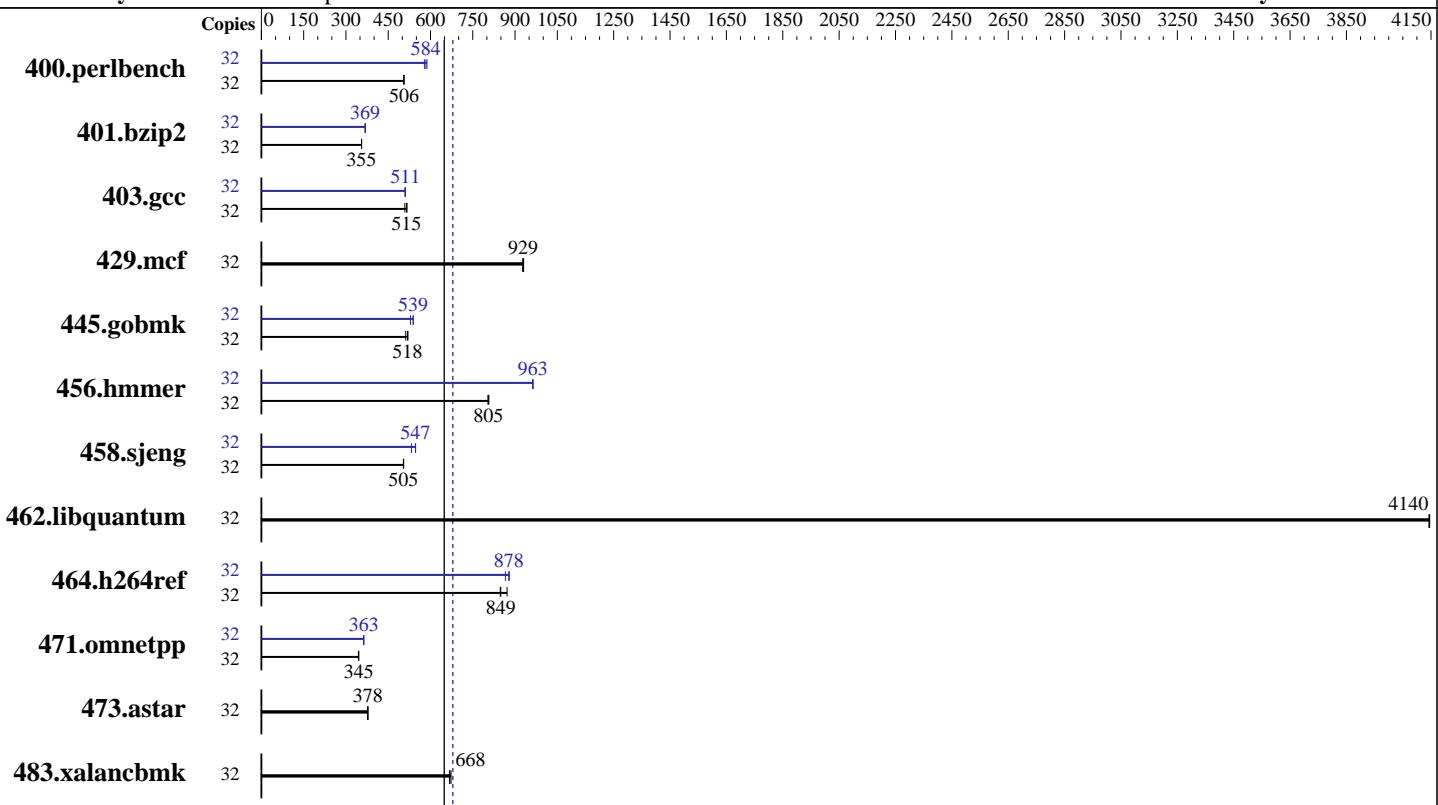
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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	32	**618**	**506**	617	506	620	504		32	**536**	**584**	532	587	541	578
401.bzip2	32	869	355	**869**	**355**	868	356		32	838	369	839	368	**838**	**369**
403.gcc	32	498	517	506	509	**500**	**515**		32	506	509	504	511	**504**	**511**
429.mcf	32	314	930	315	927	**314**	**929**		32	314	930	315	927	**314**	**929**
445.gobmk	32	655	512	**648**	**518**	645	520		32	623	539	634	529	**623**	**539**
456.hmmer	32	**371**	**805**	370	807	371	804		32	310	962	**310**	**963**	310	964
458.sjeng	32	767	505	**767**	**505**	768	504		32	708	547	**708**	**547**	727	532
462.libquantum	32	**160**	**4140**	160	4140	160	4150		32	**160**	**4140**	160	4140	160	4150
464.h264ref	32	**834**	**849**	835	848	812	872		32	**807**	**878**	805	879	818	866
471.omnetpp	32	**579**	**345**	581	344	579	345		32	551	363	550	363	**551**	**363**
473.astar	32	595	377	**595**	**378**	594	378		32	595	377	**595**	**378**	594	378
483.xalancbmk	32	328	673	**330**	**668**	331	668		32	328	673	**330**	**668**	331	668

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"
```

Platform Notes

```
   BIOS Settings:
   CPU Power and Performance Policy set to Performance
   Sysinfo program /usr/cpu2006/config/sysinfo.rev6800
   $Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
   running on localhost.localdomain Wed Sep  5 23:09:12 2012

   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 E5-2690 0 @ 2.90GHz
         2 "physical id"s (chips)
         32 "processors"
      cores, siblings (Caution: counting these is hw and system dependent.  The
      following excerpts from /proc/cpuinfo might not be reliable.  Use with
      caution.)
```

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Platform Notes (Continued)

```
       cpu cores : 8
       siblings  : 16
       physical 0: cores 0 1 2 3 4 5 6 7
       physical 1: cores 0 1 2 3 4 5 6 7
     cache size : 20480 KB

  From /proc/meminfo
     MemTotal:       132105376 kB
     HugePages_Total:        0
     Hugepagesize:      2048 kB

  /usr/bin/lsb_release -d
     Red Hat Enterprise Linux Server release 6.2 (Santiago)

  From /etc/*release* /etc/*version*
     redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
     system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
     system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

  uname -a:
     Linux localhost.localdomain 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13
     EST 2011 x86_64 x86_64 x86_64 GNU/Linux

  run-level 3 Sep 5 00:30

  SPEC is set to: /usr/cpu2006
     Filesystem    Type    Size  Used Avail Use% Mounted on
     /dev/mapper/VolGroup-lv_root
                   ext4    394G   40G  335G  11% /

  Additional information from dmidecode:
    Memory:
     8x Hynix HMT42GR7MFR4C-PB 16 GB 1600 MHz 2 rank

  (End of data from sysinfo program)
```

General Notes

```
 Environment variables set by runspec before the start of the run:
 LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RHEL5.5
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_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>
```

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Base Compiler Invocation

C benchmarks:
```
icc  -m32
```

C++ benchmarks:
```
icpc -m32
```

Base Portability Flags

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

Base Optimization Flags

C benchmarks:
```
    -xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
```

C++ benchmarks:
```
    -xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
    -Wl,-z,muldefs -L/smartheap -lsmartheap
```

Base Other Flags

C benchmarks:

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

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc  -m32
```

400.perlbench: `icc -m64`

401.bzip2: `icc -m64`

456.hmmer: `icc -m64`

458.sjeng: `icc -m64`

C++ benchmarks:
```
icpc -m32
```

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Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
   401.bzip2: -DSPEC_CPU_LP64
   456.hmmer: -DSPEC_CPU_LP64
   458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX
```

Peak Optimization Flags

C benchmarks:

```
400.perlbench: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -prof-use(pass 2) -auto-ilp32

   401.bzip2: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch
               -auto-ilp32 -ansi-alias

     403.gcc: -xAVX -ipo -O3 -no-prec-div

     429.mcf: basepeak = yes

   445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
               -ansi-alias -opt-mem-layout-trans=3

   456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

   458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -prof-use(pass 2) -unroll4
               -auto-ilp32

462.libquantum: basepeak = yes

   464.h264ref: -xAVX(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: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -prof-use(pass 2) -ansi-alias
               -opt-ra-region-strategy=block -Wl,-z,muldefs
               -L/smartheap -lsmartheap

    473.astar: basepeak = yes

483.xalancbmk: basepeak = yes
```

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Peak 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-ic12.1-official-linux64.20111122.html
http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-aw170hf2-revA.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml
http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-aw170hf2-revA.xml

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

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