CINT2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

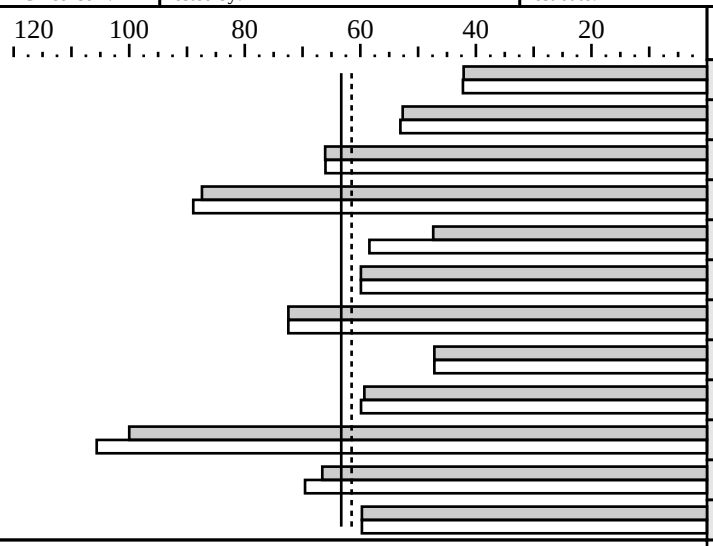
IBM Corporation

IBM System p5 510Q (1500 MHz, 4 CPU)

SPECint_rate2000 = 63.3

SPECint_rate_base2000 = 61.5

SPEC license #: 11 | Tested by: IBM | Test date: Jan-2006 | Hardware Avail: Feb-2006 | Software Avail: Feb-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	308	42.1	8	308	42.2
175.vpr	8	247	52.7	8	245	53.1
176.gcc	8	154	66.1	8	155	66.0
181.mcf	8	191	87.4	8	188	88.9
186.crafty	8	196	47.4	8	159	58.4
197.parser	8	279	59.9	8	279	59.9
252.eon	8	167	72.5	8	166	72.5
253.perlbmk	8	354	47.2	8	354	47.2
254.gap	8	172	59.3	8	170	59.9
255.vortex	8	176	100.0	8	167	106
256.bzip2	8	209	66.6	8	200	69.6
300.twolf	8	466	59.7	8	466	59.7

Hardware

CPU:	POWER5+
CPU MHz:	1500
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip (SMT on)
CPU(s) orderable:	4
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip)/core
Secondary Cache:	1920KB unified, shared (on chip)/chip
L3 Cache:	2x36MB unified (off-chip)/QCM, 1 QCM/SUT
Other Cache:	None
Memory:	8x4GB
Disk Subsystem:	1x73GB SCSI, 15K RPM
Other Hardware:	None

Software

Operating System:	AIX 5L V5.3
Compiler:	XL C/C++ Enterprise Edition Version 8.0 for AIX
File System:	AIX/JFS2
System State:	Multi-user

Notes/Tuning Information

```
Portability Flags:
  176.gcc:      -ma -DHOST_WORDS_BIG_ENDIAN
  186.crafty:   -DAIX
  253.perlbmk:  -DSPEC_CPU2000_AIX
  254.gap:      -DSYS_IS_BSD -DSYS_STRING_H
                -DSYS_HAS_MALLOC_PROTO -DSYS_HAS_CALLOC_PROTO
  300.twolf:    -DHAVE_SIGNED_CHAR

Base Optimization Flags:
  C:    -qpdf1/pdf2
        -O5 -blpdata -D_ILS_MACROS
  C++:  -qpdf1/pdf2
        -O4 -qalign=natural

Peak Optimization Flags
  164.gzip:     -qpdf1/pdf2
                -O4 -qfdpr -blpdata
                fdpr -q -O3
  175.vpr:      -qpdf1/pdf2
                -O5 -qfdpr -blpdata
```

Copyright ©1999-2005, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

```
                fdpr -q -O3
  176.gcc:      -qpdf1/pdf2
                -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -blpdata
  181.mcf:      -qpdf1/pdf2
                -O5 -qalign=natural -blpdata -qfdpr -Q
                fdpr -q -O3
  186.crafty:   -qpdf1/pdf2
                -O4 -qalign=natural -q64 -lhmu -blpdata
  197.parser:   basepeak=1
  252.eon:      -qpdf1/pdf2
                -O4 -qalign=natural
  253.perlbmk:  basepeak=1
  254.gap:      -qpdf1/pdf2
                -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -blpdata
  255.vortex:   -qpdf1/pdf2
                -O4 -qfdpr -lhmu -blpdata
                fdpr -q -O3
  256.bzip2:    -qpdf1/pdf2
                -O5 -qfdpr -blpdata
                fdpr -q -O3
  300.twolf:    basepeak=1
```

The installed OS level is AIX 5L for POWER version 5.3 with the 5300-04 Recommended Technology Level.

SMT: Acronym for "Simultaneous Multi-Threading". A processor technology that allows the simultaneous execution of multiple thread contexts within a single processor core. (Enabled by default)
QCM: Acronym for "Quad-Core Module" (Two dual-core processor chips + two L3-cache chips)
SUT: Acronym for "System Under Test"

Extended C: IBM XL C for AIX invoked as cc
C++: IBM XL C for AIX invoked as xlC

ulimits set to unlimited.
Large page mode and memory affinity were set as follows:

```
    vmo -r -o lgpg_regions=800 -o lgpg_size=16777216
    chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
    shutdown -rF
    export MEMORY_AFFINITY=MCM
```

The following config-file entry was used to assign each benchmark process to a core:

```
submit = let "MYCPU=2*$SPECUSERNUM"; if (("$MYCPU > 7")) then let "MYCPU-=7"; fi; bindprocessor $$ $MYCPU; $command
```

The "bindprocessor" AIX command binds a process to a CPU core.