CINT2000 Result

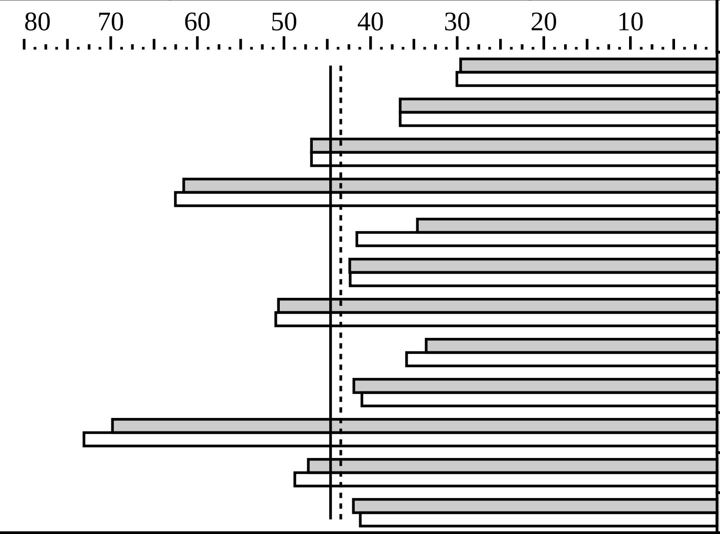
IBM Corporation

IBM System p5 510 (2100 MHz, 2 CPU)

SPECint_rate2000 = 44.6

SPECint_rate_base2000 = 43.4

SPEC license #:	11	Tested by:	IBM Austin	Test date:	Jun-2006	Hardware Avail:	Aug-2006	Software Avail:	Aug-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	219	29.6	4	216	30.0
175.vpr	4	178	36.6	4	178	36.6
176.gcc	4	109	46.8	4	109	46.8
181.mcf	4	136	61.6	4	134	62.5
186.crafty	4	134	34.6	4	112	41.6
197.parser	4	197	42.4	4	197	42.4
252.eon	4	119	50.6	4	118	50.9
253.perlbmk	4	249	33.6	4	233	35.8
254.gap	4	122	41.9	4	124	41.0
255.vortex	4	126	69.8	4	121	73.1
256.bzip2	4	147	47.2	4	143	48.7
300.twolf	4	332	42.0	4	338	41.2

Hardware

CPU:	POWER5+
CPU MHz:	2100
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip (SMT on)
CPU(s) orderable:	1,2 core
Parallel:	No
Primary Cache:	64 KB I + 32 KB D on chip per core
Secondary Cache:	1920 KB I+D on chip per chip
L3 Cache:	36 MB I+D off chip per chip, 1 chip per SUT
Other Cache:	None
Memory:	16 GB (8x2 GB)
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 XL Fortran Enterprise Edition Version 10.1 for AIX Other Software: ESSL 4.2.0.4
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:      basepeak=1
  176.gcc:      basepeak=1
```

Notes/Tuning Information (Continued)

```
    181.mcf:        -qpdf1/pdf2
                    -O5 -blpdata -qalign=natural -qhot=arraypad -qfdpr -Q -qmaxmem=-1
                    fdpr -q -O3
    186.crafty:     -qpdf1/pdf2
                    -O4 -qalign=natural -q64 -lhmu -blpdata
    197.parser:     -qpdf1/pdf2
                    -O4 -qfdpr -D_ILS_MACROS -blpdata
                    fdpr -q -O3
    252.eon:        -qpdf1/pdf2
                    -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural
    253.perlbmk:    -qpdf1/pdf2
                    -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -blpdata -lhmu
    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:      -O5 -qfdpr -blpdata
                    fdpr -q -O3
```

The installed OS level is AIX 5L for POWER Version 5.3 with the 5300-05 Recommended Technology Level.
The installed C/C++ compiler is XL C/C++ Enterprise Edition Version 8.0 for AIX.
The installed Fortran copiler is XL Fortran Enterprise Edition Version 10.1 with the May 2006 AIX PTF.

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)
SUT: Acronym for "System Under Test"
PTF: IBM identifier for "Program Fix Level"

```
Extended C:     IBM XL C for AIX invoked as cc
ANSI C89:       IBM XL C for AIX invoked as xlc
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=512 -o lgpg_size=16777216
    chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
    bosboot -aD
    shutdown -rF
    export MEMORY_AFFINITY=MCM
```

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

```
     submit = bindprocessor $$ $SPECUSERNUM; $command
```

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