# CINT2000 Result

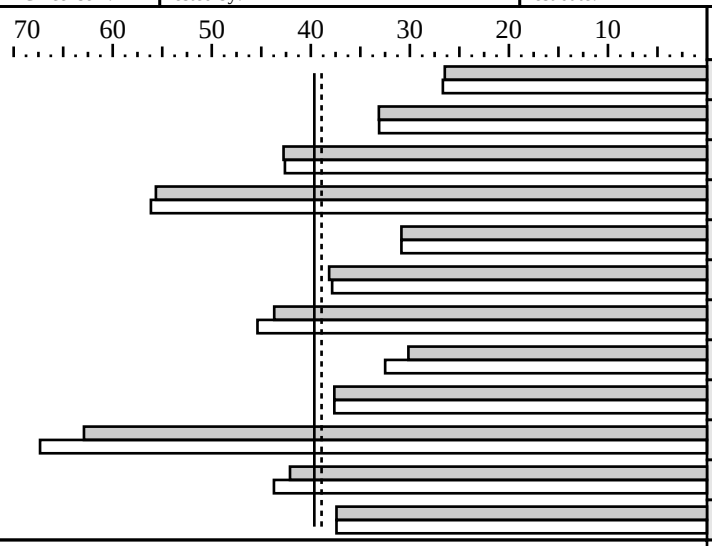
Copyright ©1999-2005, Standard Performance Evaluation Corporation

## IBM Corporation
## IBM System p5 520 (1900 MHz, 2 CPU)

SPECint_rate2000 = 39.6

SPECint_rate_base2000 = 38.9

SPEC license #: 11 | Tested by: IBM | Test date: Sep-2005 | Hardware Avail: Oct-2005 | Software Avail: Oct-2005




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 164.gzip | 4 | 245 | 26.5 | 4 | 244 | 26.7 |
| 175.vpr | 4 | 196 | 33.1 | 4 | 196 | 33.1 |
| 176.gcc | 4 | 119 | 42.8 | 4 | 120 | 42.6 |
| 181.mcf | 4 | 150 | 55.6 | 4 | 149 | 56.1 |
| 186.crafty | 4 | 150 | 30.9 | 4 | 150 | 30.9 |
| 197.parser | 4 | 219 | 38.1 | 4 | 221 | 37.8 |
| 252.eon | 4 | 138 | 43.7 | 4 | 133 | 45.4 |
| 253.perlbmk | 4 | 277 | 30.1 | 4 | 257 | 32.5 |
| 254.gap | 4 | 136 | 37.6 | 4 | 136 | 37.6 |
| 255.vortex | 4 | 140 | 62.9 | 4 | 131 | 67.3 |
| 256.bzip2 | 4 | 165 | 42.1 | 4 | 159 | 43.7 |
| 300.twolf | 4 | 372 | 37.4 | 4 | 372 | 37.4 |

### Hardware

| | |
|---|---|
| CPU: | POWER5+ |
| CPU MHz: | 1900 |
| FPU: | Integrated |
| CPU(s) enabled: | 2 cores, 1 chip, 2 cores/chip (SMT on) |
| CPU(s) orderable: | 2 |
| Parallel: | None |
| Primary Cache: | 64KBI+32KBD (on chip)/core |
| Secondary Cache: | 1920KB unified (on chip)/chip |
| L3 Cache: | 36MB unified (off-chip)/DCM, 1 DCM/SUT |
| Other Cache: | None |
| Memory: | 8x2GB |
| 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
  252.eon:      srcalt=fmax_errno
  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
        -O5 -lhmu -qalign=natural

Peak Optimization Flags
  164.gzip:     -qpdf1/pdf2
                -O5 -qalign=natural -lhmu -blpdata -qfdpr -Q
                fdpr -q -O3
  175.vpr:      -qpdf1/pdf2
```

Copyright ©1999-2005, Standard Performance Evaluation Corporation



## Notes/Tuning Information (Continued)

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


Approved alternate-source file 252.eon.fmax_errno.src.alt.tar.gz
was used with 252.eon for POSIX-compatibility.

The installed OS level is AIX 5L for POWER version 5.3 with the 5300-03 Recommended Maintenance package.

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)
DCM:  Acronym for "Dual-Chip Module" (one dual-core processor chip + one L3-cache chip)
SUT:  Acronym for "System Under Test"

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=400 -o lgpg_size=16777216
    chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
    reboot -q
    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 > 3")) then let "MYCPU-=3"; fi; bindprocessor $$ $MYCPU; $command
The "bindprocessor" AIX command binds a process to a CPU core.

Use flags-description file IBM-20050919-AIX.txt.
```