# CINT2000 Result



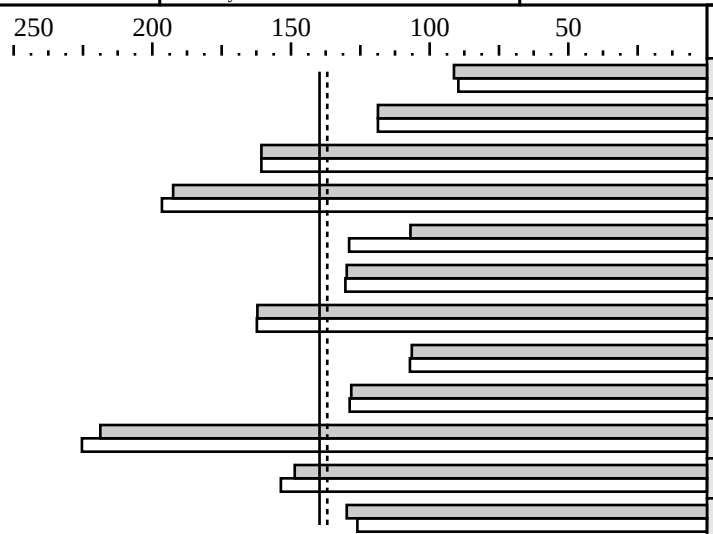
## IBM Corporation

## IBM System p5 550Q (1650 MHz, 8 CPU)

SPECint_rate2000 = 140

SPECint_rate_base2000 = 137

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 | 16 | 285 | 91.2 | 16 | 290 | 89.7 |
| 175.vpr | 16 | 219 | 119 | 16 | 219 | 119 |
| 176.gcc | 16 | 127 | 161 | 16 | 127 | 161 |
| 181.mcf | 16 | 174 | 193 | 16 | 170 | 196 |
| 186.crafty | 16 | 174 | 107 | 16 | 144 | 129 |
| 197.parser | 16 | 257 | 130 | 16 | 256 | 130 |
| 252.eon | 16 | 149 | 162 | 16 | 149 | 162 |
| 253.perlbmk | 16 | 314 | 106 | 16 | 312 | 107 |
| 254.gap | 16 | 159 | 128 | 16 | 159 | 129 |
| 255.vortex | 16 | 161 | 219 | 16 | 156 | 225 |
| 256.bzip2 | 16 | 187 | 149 | 16 | 181 | 154 |
| 300.twolf | 16 | 429 | 130 | 16 | 442 | 126 |

### Hardware

| | |
|---|---|
| CPU: | POWER5+ |
| CPU MHz: | 1650 |
| FPU: | Integrated |
| CPU(s) enabled: | 8 cores, 4 chips, 2 cores/chip (SMT on) |
| CPU(s) orderable: | 4,8 cores |
| 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, 4 chips per SUT |
| Other Cache: | None |
| Memory: | 64 GB (16x4 GB) |
| Disk Subsystem: | 2x73GB SCSI, 15K RPM |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | AIX 5L V5.3 |
| Compiler: | XL C/C++ Enterprise Edition Version 8.0 for AIX<br>XL Fortran Enterprise Edition Version 10.1 for AIX<br>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 with the March 2006 PTF.
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=1024 -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.
```