CINT2000 Result

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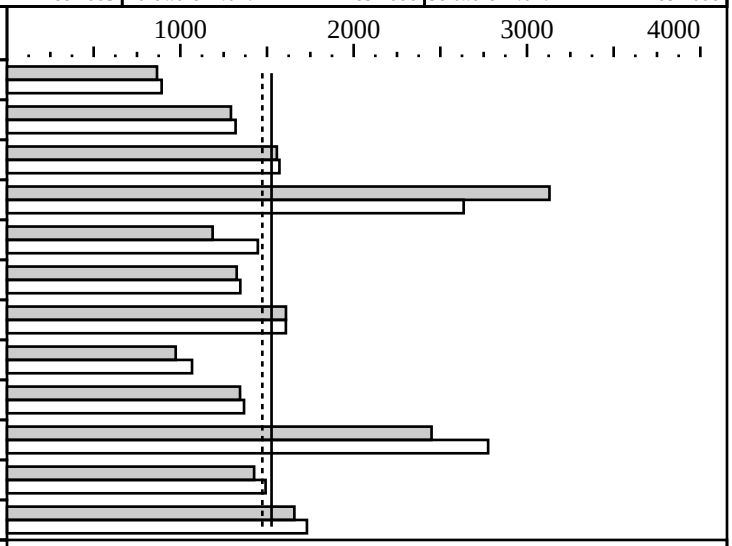
IBM Corporation
IBM System p5 575 (1900 MHz, 1 CPU)

SPECint2000 = 1526

SPECint_base2000 = 1473

SPEC license #: 11 | Tested by: IBM | Test date: Dec-2005 | Hardware Avail: Feb-2006 | Software Avail: Feb-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
164.gzip	1400	162	865	157	892
175.vpr	1400	108	1292	106	1319
176.gcc	1100	70.7	1557	70.0	1572
181.mcf	1800	57.5	3130	68.3	2635
186.crafty	1000	84.3	1186	69.1	1447
197.parser	1800	136	1325	134	1346
252.eon	1300	80.8	1609	80.8	1609
253.perlbmk	1800	185	973	169	1068
254.gap	1100	81.8	1344	80.4	1368
255.vortex	1900	77.6	2449	68.4	2776
256.bzip2	1500	105	1426	101	1492
300.twolf	3000	181	1658	173	1730



Hardware

CPU:	POWER5+
CPU MHz:	1900
FPU:	Integrated
CPU(s) enabled:	1 core, 8 chips, 2 cores/chip (SMT off)
CPU(s) orderable:	8,16
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip)/core
Secondary Cache:	1920KB unified, shared (on chip)/chip
L3 Cache:	36MB unified (off-chip)/DCM, 8 DCMs/SUT
Other Cache:	None
Memory:	64x2GB
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
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
```

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Notes/Tuning Information (Continued)

```
                fdpr -q -O3
  176.gcc:      -qpdf1/pdf2
                -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -blpdata
  181.mcf:      -qpdf1/pdf2
                -O4 -qalign=natural -blpdata
  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 -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 5300-04 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)
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
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=1600 -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 = bindprocessor $$ $SPECUSERNUM; $command
The "bindprocessor" AIX command binds a process to a CPU core.
Fifteen cores were deconfigured and SMT disabled using the AIX commands
     smtctl -m off -w boot
     bosboot -aD
     shutdown -rF
     drmgr -r -c cpu
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```

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Notes/Tuning Information (Continued)

```
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