CINT2000 Result

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IBM Corporation

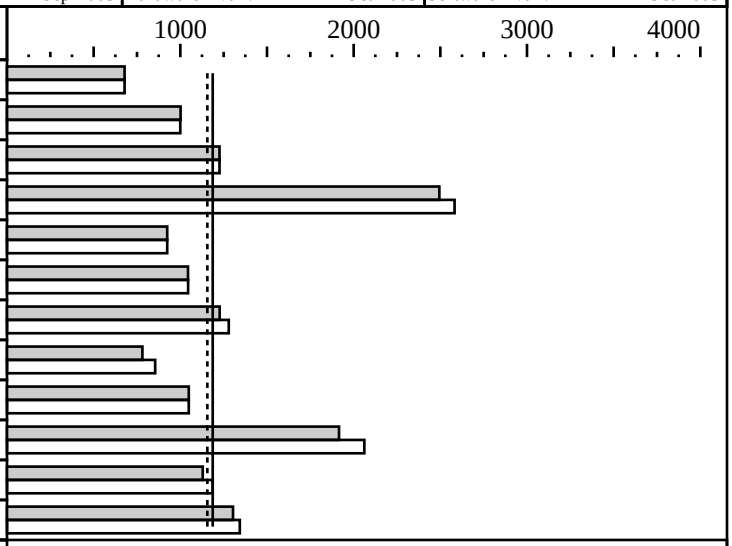
IBM System p5 550Q (1500 MHz, 1 CPU)

SPECint2000 = 1187

SPECint_base2000 = 1156

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
164.gzip	1400	206	678	206	678
175.vpr	1400	140	1001	140	1000
176.gcc	1100	89.7	1226	89.7	1226
181.mcf	1800	72.2	2494	69.7	2582
186.crafty	1000	108	924	108	924
197.parser	1800	172	1044	172	1045
252.eon	1300	106	1227	102	1279
253.perlbmk	1800	230	781	211	855
254.gap	1100	105	1049	105	1049
255.vortex	1900	99.2	1916	92.2	2062
256.bzip2	1500	133	1129	126	1187
300.twolf	3000	230	1304	223	1343



Hardware

CPU:	POWER5+
CPU MHz:	1500
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip (SMT off)
CPU(s) orderable:	4,8
Parallel:	None
Primary Cache:	64KBI+32KBD (on chip)/core
Secondary Cache:	1920KB unified (on chip)/chip
L3 Cache:	2x36MB unified (off-chip)/QCM, 2 QCM/SUT
Other Cache:	None
Memory:	16x4GB
Disk Subsystem:	1x36GB 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:     basepeak=1
  175.vpr:      -qpdf1/pdf2
                -O5 -lhmu -blpdata -D_ILS_MACROS
  176.gcc:      basepeak=1
```

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Notes/Tuning Information (Continued)

```
  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:    -O5 -blpdata -qfdpr -D_ILS_MACROS
                fdpr -q -O3


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)
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
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=1600 -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 > 15")) then let "MYCPU-=15"; fi; bindprocessor $$ $MYCPU; $command
The "bindprocessor" AIX command binds a process to a CPU core.
Seven cores were deconfigured and SMT disabled at the open-firmware prompt, using the
command
            boot -s cpu=1 -s smt_off

Use flags-description file IBM-20051013-AIX.txt.
```