CINT2000 Result

IBM Corporation

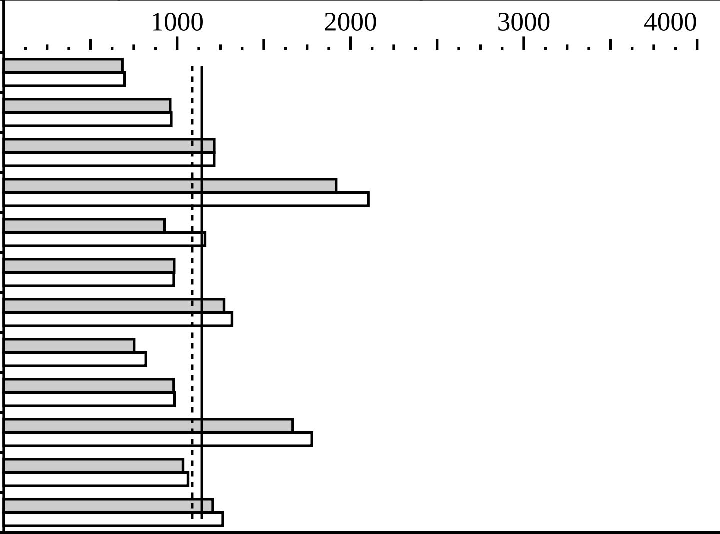
IBM eServer p5 575 (1500 MHz, 1 CPU)

SPECint2000 = 1143

SPECint_base2000 = 1087

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
164.gzip	1400	205	684	201	697
175.vpr	1400	146	960	145	966
176.gcc	1100	90.6	1214	90.6	1214
181.mcf	1800	93.9	1917	85.6	2104
186.crafty	1000	108	928	86.1	1161
197.parser	1800	183	983	184	981
252.eon	1300	102	1271	98.7	1317
253.perlbmk	1800	239	752	220	820
254.gap	1100	112	980	112	985
255.vortex	1900	114	1667	107	1777
256.bzip2	1500	145	1034	141	1063
300.twolf	3000	249	1206	237	1264



Hardware

CPU:	POWER5
CPU MHz:	1500
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip (SMT off)
CPU(s) orderable:	16
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip)/core
Secondary Cache:	1920KB unified (on chip)/chip
L3 Cache:	36MB unified (off-chip)/DCM, 8 DCM/SUT
Other Cache:	None
Memory:	64x2GB
Disk Subsystem:	1x73GB SCSI, 15K RPM
Other Hardware:	None

Software

Operating System:	AIX 5L V5.3
Compiler:	XL C/C++ Enterprise Edition Version 7.0 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 -qalign=natural -D_ILS_MACROS

Peak Optimization Flags
  164.gzip:     -qpdf1/pdf2
                -O5 -blpdata -qfdpr -D_ILS_MACROS
                fdpr -q -O3
  175.vpr:      -qpdf1/pdf2
```

CINT2000 Result

Notes/Tuning Information (Continued)

```
                  -O5 -blpdata -qalign=natural -qhot=arraypad -Q -D_ILS_MACROS
   176.gcc:       -qpdf1/pdf2
                  -O5 -blpdata -qalign=natural -qhot=arraypad -Q -D_ILS_MACROS
   181.mcf:       -O5 -blpdata -qfdpr -D_ILS_MACROS
                  fdpr -q -O3
   186.crafty:    -qpdf1/pdf2
                  -O4 -q64 -qfdpr -qarch=pwr3 -qtune=pwr3
                  fdpr -q -O3
   197.parser:    -qpdf1/pdf2
                  -O5 -blpdata -qalign=natural -D_ILS_MACROS
   252.eon:       -qpdf1/pdf2
                  -O4 -qarch=auto -qtune=auto -qalign=natural -lhmu -D_ILS_MACROS
   253.perlbmk:   -qpdf1/pdf2
                  -O5 -lhmu -blpdata -D_ILS_MACROS
   254.gap:       -qpdf1/pdf2
                  -O5 -lhmu -blpdata -D_ILS_MACROS
   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
```

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

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

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"

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=4096 -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 > 31")) then let "MYCPU-=31"; fi; bindprocessor $$ $MYCPU; $command
```

The "bindprocessor" AIX command binds a process to a CPU core.
Fifteen 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-20050822-AIX.txt.