CINT2000 Result

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IBM Corporation

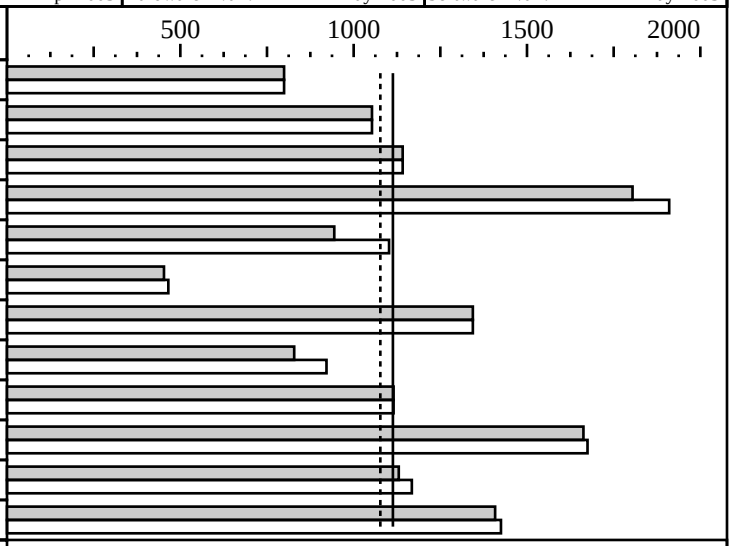
IBM eServer pSeries 690 Turbo (1700 MHz, 1 CPU)

SPECint2000 = 1113

SPECint_base2000 = 1077

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: Apr-2003 | Hardware Avail: May-2003 | Software Avail: May-2003

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
164.gzip	1400	175	799	175	799
175.vpr	1400	133	1053	133	1053
176.gcc	1100	96.4	1141	96.4	1141
181.mcf	1800	99.8	1804	94.2	1910
186.crafty	1000	106	944	90.7	1102
197.parser	1800	398	453	387	465
252.eon	1300	96.7	1344	96.7	1344
253.perlbmk	1800	217	828	195	922
254.gap	1100	98.6	1115	98.6	1115
255.vortex	1900	114	1663	113	1675
256.bzip2	1500	133	1130	128	1168
300.twolf	3000	213	1408	211	1425



Hardware

CPU:	POWER4+
CPU MHz:	1700
FPU:	Integrated
CPU(s) enabled:	1 core, 4 chips, 2 cores/chip, 4 chips/MCM
CPU(s) orderable:	1,2,3,4 MCMs (order by # MCM)
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip) per core
Secondary Cache:	1536KB unified (on chip) per chip
L3 Cache:	128MB unified (off-chip) per MCM, 4 MCMs in SUT
Other Cache:	None
Memory:	16 GB
Disk Subsystem:	1x36GB SCSI, 10K RPM
Other Hardware:	None

Software

Operating System:	AIX 5L V5.2
Compiler:	IBM C for AIX, Version 6.0 IBM VisualAge C++ Professional for AIX, Version 6.0
File System:	AIX/JFS
System State:	Multi-User

Notes/Tuning Information

```
Integer Portability Flags:
  176.gcc:     -ma -DHOST_WORDS_BIG_ENDIAN
  186.crafty:  -DAIX
  252.eon:     -DNEED_EXPLICIT_SPECIALIZATION
               -I. -DNDEBUG
  253.perlbmk: -DSPEC_CPU2000_AIX
  254.gap:     -DSYS_IS_BSD -DSYS_STRING_H -DSYS_HAS_TIME_PROTO
               -DSYS_HAS_MALLOC_PROTO -DSYS_HAS_CALLOC_PROTO
  300.twolf:   -DHAVE_SIGNED_CHAR

Base Optimization Flags:
  C:
  -qpdf1/pdf2
  -O5 -blpdata -qalign=natural
  C++:
  -qpdf1/pdf2
  -O5 -lhmu -qalign=natural

Integer Peak Optimization Flags
164.gzip
```

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Notes/Tuning Information (Continued)

```
    BASEPEAK = 1
    "CC      = /usr/vac/bin/xlc"
  175.vpr
    BASEPEAK = 1
  176.gcc
    BASEPEAK = 1
  181.mcf
    fdpr -v -R3
    -O5 -blpdata
  186.crafty
    -qpdf1/pdf2
    fdpr -v -R3
    -O3 -q64
  197.parser
    -O5 -blpdata
  252.eon
    BASEPEAK = 1
  253.perlbmk
    -qpdf1/pdf2
    -O5 -lhmu -qalign=natural
  254.gap
    BASEPEAK = 1
  255.vortex
    -qpdf1/pdf2
    -O5 -lhmu -qalign=natural
  256.bzip2
    -qpdf1/pdf2
    -O5 -blpdata -qarch=pwr3 -qtune=pwr3
  300.twolf
    -qpdf1/pdf2
    -O5 -lhmu -qalign=natural -blpdata
    "CC      = /usr/vac/bin/xlc"

    MCM: Acronym for "Multi-Chip Module"
    SUT: Acronym for "System Under Test"

    31 processors were deconfigured through the configuration menu.
    6 memory-cards were deconfigured through the configuration menu.

    fpdr: Feedback directed program restructuring tool
    /usr/spec2000 filesystem mounted with no JFS log file I/O.
    APAR IY 36772 was applied to AIX to enable new hardware support.
    ulimits set to unlimited.
    C: IBM VAC++ invoked as cc except where noted as xlc
    C++: IBM VAC++ invoked as xlC
    Large page mode and memory affinity were set as follows:
      vmo -r -o lgpg_regions=32 -o lgpg_size=16777216 -o memory_affinity=1
      chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
      shutdown -r
      export MEMORY_AFFINITY=MCM
```