



CINT2000 Result

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Hewlett-Packard Company

HP Integrity rx8620 (1500 MHz Itanium 2)

SPECint_rate2000 = 232

SPECint_rate_base2000 = 228

SPEC license #: 3 Tested by: HP Richardson Test date: Oct-2003 Hardware Avail: Nov-2003 Software Avail: Oct-2003

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	16	148	175	16	148	175
175.vpr	16	132	196	16	128	202
176.gcc	16	76.5	267	16	76.5	267
181.mcf	16	105	317	16	105	317
186.crafty	16	82.0	226	16	81.3	228
197.parser	16	188	178	16	188	178
252.eon	16	85.9	281	16	82.2	294
253.perlbnk	16	154	217	16	145	231
254.gap	16	129	159	16	129	159
255.vortex	16	104	340	16	101	347
256.bzip2	16	126	221	16	126	221
300.twolf	16	234	238	16	229	243

Hardware

CPU: Intel Itanium 2
CPU MHz: 1500
FPU: Integrated
CPU(s) enabled: 16 cores, 16 chips, 1 core/chip
CPU(s) orderable: 2,4,6,8,10,12,14,16
Parallel: no
Primary Cache: 16KBI + 16KBD (on chip) per CPU
Secondary Cache: 256KB (on chip) per CPU
L3 Cache: 6.0MB (on chip) per CPU
Other Cache: N/A
Memory: 32GB (64 * 512MB DIMMs)
Disk Subsystem: 10x36GB 10K rpm SCSI (striped)
Other Hardware: N/A

Software

Operating System: HPUX11i-TCOE B.11.23
Compiler: HP C/ANSI C Compiler A.05.52
HP aC++ Compiler A.05.52
File System: vxfs
System State: Multi-user

Notes/Tuning Information

Portability Flags

```
176.gcc : -DHOST_WORDS_BIG_ENDIAN
186.crafty : -DHP
252.eon : -DFMAX_IS_DOUBLE
253.perlbnk : -DSPEC_CPU2000_HP
254.gap : -DSPEC_CPU2000_HP -DSYS_IS_USG -DSYS_HAS_IOCTL_PROTO
        -DSYS_HAS_TIME_PROTO -DSYS_HAS_CALLOC_PROTO
```

Base Flags

```
all : +Oprofile=collect:all/+Oprofile=use
C : +Ofaster -exec +Odatalayout
C++ : +Ofaster +inline_level 2 -minshared
```

Peak Flags

```
164.gzip : basepeak=true
175.vpr : +Oprofile=collect:all/+Oprofile=use +Ofaster -exec +Odatalayout
        +Onoptrs_to_globals +Onorecovery
176.gcc : basepeak=true
181.mcf : basepeak=true
186.crafty : +Oprofile=collect:all/+Oprofile=use +Ofaster -exec +Odatalayout
```



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Notes/Tuning Information (Continued)

```

+Otype_safety=ansi
197.parser : basepeak=true
252.eon : +Oprofile=collect:all/+Oprofile=use +Ofaster +inline_level 2
        -minshared +Otype_safety=ansi
253.perlbnk : +Oprofile=collect:all/+Oprofile=use +Ofaster -exec +Odatalayout
            +Onoptrs_to_globals
            LIBS = /opt/langtools/lib/hpux32/fastmem.o
254.gap : basepeak=true
255.vortex : +Oprofile=collect:all/+Oprofile=use +Ofaster -exec +Odatalayout
            +Onoptrs_to_globals +Onorecovery
256.bzip2 : basepeak=true
300.twolf : +Oprofile=collect:all/+Oprofile=use +Ofaster -exec +Odatalayout
            +Onoptrs_to_globals
            LIBS = /opt/langtools/lib/hpux32/effmem.o

```

Kernel Tunables:

```

dbc_max_pct=20
dbc_min_pct=20
maxdsiz=3221225472
maxssiz=401604608
maxdsiz_64bit=4396972761584
maxssiz_64bit=1073741824
vps_pagesize=4096
vps_ceiling=16384

```

The system under test had the HP-UX 11i v2 (version 11.23) Technical Computing Operating Environment and compilers installed, with the following patches applied:

```

PHSS_29655 aC++ compiler (A.05.52)
PHSS_29656 HP C Compiler (A.05.52)
PHSS_29657 u2comp/be/plugin library Patch
PHSS_29663 Fortran Product Patch, v2.7 to v2.7.2

```

Notes:

System was configured with 1/2 of memory interleaved and 1/2 of memory local to each cell

System configured as a single partition with 4 cells and 4 processors per cell

Processes were assigned to localities using the HP-UX mpsched utility

Filesystem used for spec runs mounted "tmplog"