



# CINT2000 Result

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Hewlett-Packard Company  
HP Integrity rx8620 (1300 MHz Itanium 2)

SPECint\_rate2000 = 91.9  
SPECint\_rate\_base2000 = 90.5

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	170	76.5	8	170	76.5
175.vpr	8	169	76.9	8	165	78.6
176.gcc	8	92.5	110	8	92.5	110
181.mcf	8	256	65.2	8	256	65.2
186.crafty	8	95.8	96.9	8	93.5	99.3
197.parser	8	233	71.8	8	233	71.8
252.eon	8	98.0	123	8	94.3	128
253.perlbnk	8	179	93.3	8	172	97.3
254.gap	8	141	72.1	8	141	72.1
255.vortex	8	127	138	8	124	142
256.bzip2	8	160	87.0	8	160	87.0
300.twolf	8	270	103	8	263	106

### Hardware

CPU: Intel Itanium 2  
 CPU MHz: 1300  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 8 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: 3.0MB (on chip) per CPU  
 Other Cache: N/A  
 Memory: 16GB (32 \* 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 2 cells and 4 processors per cell

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

Filesystem used for spec runs mounted "tmplog"