



# CINT2000 Result

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**Hewlett-Packard Company**  
HP Integrity Server rx4640 (1300 MHz, Itanium 2)

SPECint\_rate2000 = 13.1  
SPECint\_rate\_base2000 = 13.0

SPEC license #: 3 Tested by: HP Richardson Test date: Jan-2004 Hardware Avail: Jan-2004 Software Avail: Mar-2004

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	1	170	9.53	1	170	9.53
175.vpr	1	148	11.0	1	147	11.0
176.gcc	1	82.6	15.4	1	82.6	15.4
181.mcf	1	156	13.4	1	156	13.4
186.crafty	1	94.7	12.3	1	94.7	12.3
197.parser	1	213	9.78	1	213	9.78
252.eon	1	84.4	17.9	1	80.5	18.7
253.perlbnk	1	166	12.6	1	154	13.6
254.gap	1	108	11.8	1	108	11.8
255.vortex	1	118	18.7	1	117	18.9
256.bzip2	1	136	12.8	1	136	12.8
300.twolf	1	255	13.6	1	249	14.0

### Hardware

CPU: Intel Itanium 2  
CPU MHz: 1300  
FPU: Integrated  
CPU(s) enabled: 1 core, 1 chip, 1 core/chip  
CPU(s) orderable: 1-4  
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: 32GB (16 \* 2GB DIMMs)  
Disk Subsystem: 1x36GB 10k RPM SCSI disk  
Other Hardware: N/A

### Software

Operating System: HPUX11i-TCOE B.11.23  
Compiler: HP C/ANSI C Compiler C.05.55  
HP aC++ Compiler C.05.55  
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

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

### Peak Flags

```
164.gzip : basepeak=true
175.vpr : PBO +Ofaster +Odatalayout +Onorecovery
        +Onoptrs_to_globals -exec
        LIBS = -Wl,-aarchive_shared -Bprotected
176.gcc : basepeak=true
181.mfc : basepeak=true
```



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## Notes/Tuning Information (Continued)

```

186.crafty : basepeak=true
197.parser : basepeak=true
252.eon    : PBO +Ofaster +Odatalayout +Otype_safety=ansi
           +inline_level 2 -minshared
253.perlbnk: PBO +Ofaster +Odatalayout +Onoptrs_to_globals -exec
           LIBS = -Wl,-aarchive_shared -Bprotected_def fastmem.o
254.gap    : basepeak=true
255.vortex : PBO +Ofaster +Odatalayout +Onorecovery
           +Onoptrs_to_globals -exec
           LIBS = -Wl,-aarchive_shared -Bprotected
256.bzip2  : basepeak=true
300.twolf  : PBO +Ofaster +Odatalayout +Onoptrs_to_globals -exec
           LIBS = -Wl,-aarchive_shared -Bprotected_data effmem.o

```

### Kernel Tunables:

```

maxssiz          268435456
vps_ceiling      16384
vps_pagesize     4096
swapmem_on       1
dbc_max_pct      20
dbc_min_pct      20

```

### Note:

```

EFI shell utility 'cpuconfig' used
to deconfigure processors if necessary

```