



# CINT2000 Result

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

SPECint\_rate2000 = 25.8  
SPECint\_rate\_base2000 = 25.5

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	2	171	19.0	2	171	19.0
175.vpr	2	149	21.8	2	148	22.0
176.gcc	2	82.8	30.8	2	82.8	30.8
181.mcf	2	168	24.9	2	168	24.9
186.crafty	2	101	23.0	2	101	23.0
197.parser	2	219	19.1	2	219	19.1
252.eon	2	82.6	36.5	2	80.6	37.4
253.perlbnk	2	165	25.3	2	153	27.2
254.gap	2	112	22.8	2	112	22.8
255.vortex	2	117	37.5	2	117	37.8
256.bzip2	2	136	25.6	2	136	25.6
300.twolf	2	255	27.3	2	248	28.0

### Hardware

CPU: Intel Itanium 2  
CPU MHz: 1300  
FPU: Integrated  
CPU(s) enabled: 2 cores, 2 chips, 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

```