



# CINT2000 Result

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**Hewlett-Packard Company**  
HP Integrity Server rx4640 (1500 MHz, Itanium 2)

SPECint\_rate2000 = 32.5  
SPECint\_rate\_base2000 = 32.0

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	2	149	21.9	2	149	21.9
175.vpr	2	120	27.0	2	120	27.1
176.gcc	2	69.9	36.5	2	69.9	36.5
181.mcf	2	73.3	57.0	2	73.3	57.0
186.crafty	2	80.8	28.7	2	80.8	28.7
197.parser	2	174	24.0	2	174	24.0
252.eon	2	72.6	41.5	2	69.7	43.3
253.perlbnk	2	144	29.1	2	131	31.8
254.gap	2	100	25.5	2	100	25.5
255.vortex	2	97.6	45.1	2	96.7	45.6
256.bzip2	2	111	31.4	2	111	31.4
300.twolf	2	221	31.5	2	215	32.3

### Hardware

CPU: Intel Itanium 2  
 CPU MHz: 1500  
 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: 6.0MB (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

```