



# CINT2000 Result

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Hewlett-Packard Company  
HP Integrity rx8620 (1500 MHz Itanium 2)

SPECint\_rate2000 = 116  
SPECint\_rate\_base2000 = 115

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	8	148	87.7	8	148	87.7
175.vpr	8	132	98.2	8	128	101
176.gcc	8	76.4	134	8	76.4	134
181.mcf	8	105	159	8	105	159
186.crafty	8	81.9	113	8	81.1	114
197.parser	8	187	89.2	8	187	89.2
252.eon	8	84.9	142	8	81.7	148
253.perlbnk	8	153	109	8	144	116
254.gap	8	128	79.6	8	128	79.6
255.vortex	8	103	171	8	101	175
256.bzip2	8	125	111	8	125	111
300.twolf	8	233	119	8	228	122

### Hardware

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