



CINT2000 Result

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

SPECint_rate2000 = 16.3
SPECint_rate_base2000 = 16.0

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	148	10.9	1	148	10.9
175.vpr	1	120	13.5	1	119	13.6
176.gcc	1	69.9	18.3	1	69.9	18.3
181.mcf	1	72.8	28.7	1	72.8	28.7
186.crafty	1	80.6	14.4	1	80.6	14.4
197.parser	1	176	11.9	1	176	11.9
252.eon	1	74.0	20.4	1	69.7	21.6
253.perlbnk	1	146	14.3	1	132	15.9
254.gap	1	96.6	13.2	1	96.6	13.2
255.vortex	1	97.4	22.6	1	96.7	22.8
256.bzip2	1	111	15.7	1	111	15.7
300.twolf	1	221	15.7	1	216	16.1

Hardware

CPU: Intel Itanium 2
 CPU MHz: 1500
 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: 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

```