



CINT2000 Result

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Hewlett-Packard Company
HP Integrity rx7620 (1500 MHz Itanium 2)

SPECint_rate2000 = 58.6
SPECint_rate_base2000 = 57.7

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	4	148	43.8	4	148	43.8
175.vpr	4	131	49.4	4	128	50.6
176.gcc	4	76.1	67.1	4	76.1	67.1
181.mcf	4	102	81.7	4	102	81.7
186.crafty	4	82.0	56.6	4	81.2	57.2
197.parser	4	187	44.6	4	187	44.6
252.eon	4	84.5	71.4	4	81.3	74.2
253.perlbnk	4	153	54.7	4	144	57.9
254.gap	4	124	41.2	4	124	41.2
255.vortex	4	103	85.7	4	101	87.7
256.bzip2	4	125	55.5	4	125	55.5
300.twolf	4	235	59.3	4	228	61.0

Hardware

CPU: Intel Itanium 2
CPU MHz: 1500
FPU: Integrated
CPU(s) enabled: 4 cores, 4 chips, 1 core/chip
CPU(s) orderable: 2,4,6,8
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: 2x18GB 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 2 processors per cell
(unused processors disabled by firmware comand cpuconfig)

Processes were assigned to localities using the HP-UX mpsched utility

Filesystem used for spec runs mounted "tmplog"