CINT2000 Result

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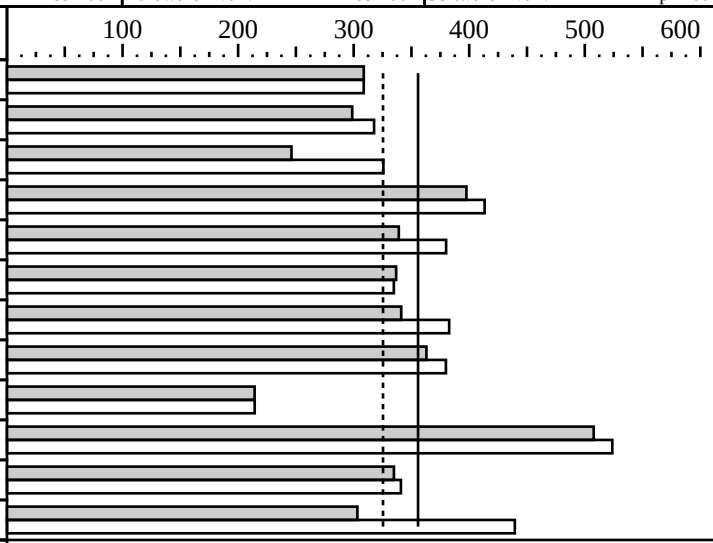
Fujitsu Limited
PRIMEPOWER400 (500MHz)

SPECint2000 = 356

SPECint_base2000 = 325

SPEC license #: 19 | Tested by: Fujitsu Limited | Test date: Feb-2001 | Hardware Avail: Feb-2001 | Software Avail: Apr-2001

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
164.gzip	1400	453	309	453	309
175.vpr	1400	469	299	441	318
176.gcc	1100	447	246	338	326
181.mcf	1800	453	398	435	413
186.crafty	1000	295	339	263	380
197.parser	1800	535	337	538	335
252.eon	1300	381	341	340	383
253.perlbmk	1800	496	363	474	380
254.gap	1100	513	214	513	214
255.vortex	1900	374	508	363	524
256.bzip2	1500	448	335	440	341
300.twolf	3000	989	303	683	439



Hardware

CPU:	SPARC64 GP
CPU MHz:	501
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip
CPU(s) orderable:	1 to 4
Parallel:	None
Primary Cache:	128KBI+128KBD on chip
Secondary Cache:	8MB(I+D) off chip, per CPU
L3 Cache:	None
Other Cache:	None
Memory:	2048MB
Disk Subsystem:	1 x 36.4GB SCSI (10025rpm)
Other Hardware:	Ethernet

Software

Operating System:	Solaris 8
Compiler:	Fujitsu Parallelnavi 1.0.1 Sun Forte Developer 6 update 1
File System:	ufs
System State:	single user

Notes/Tuning Information

```
Baseline (except 252.eon, for Parallelnavi 1.0.1): -Kfast_GP=3,largepage
 fdo_pre0=rm -rf ‘pwd‘/*.fbk
 PASS1=-Kpg
 PASS2=-Kpu=$(EXEBASE).fbk
(252.eon, for Forte Developer 6 update 1): -fast -xcrossfile -xarch=v8plus
 fdo_pre0=rm -rf ‘pwd‘/../feedback.profile ‘pwd‘/SunWS_cache
 PASS1=-xprofile=collect:‘pwd‘/../feedback
 PASS2=-xprofile=use:‘pwd‘/../feedback

Peak (for Parallelnavi 1.0.1):
 fdo_pre0=rm -rf ‘pwd‘/*.fbk
 PASS1=-Kpg
 PASS2=-Kpu=$(EXEBASE).fbk
 164.gzip: -Kfast_GP=3,largepage
 175.vpr: -Kfast_GP=4,staticclump,memalias,switchopt,cond,GREG,nounroll,largepage,onefile,NOFLTLD=3,xi=30
 181.mcf: -Kfast_GP=2,nounroll,memalias,restp,prefetch=4,largepage -x-
 186.crafty: -Kfast_GP=3,switchopt,cond,noiopt,staticclump,xi=6,memalias,largepage
 197.parser: -Kfast_GP=3,switchopt,cond,staticclump,use_rodata,largepage,funcalign=128
 253.perlbmk: -Kfast_GP=3,memalias,switchopt,largepage,bcopy
 254.gap: -Kfast_GP=3,largepage
```

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Notes/Tuning Information (Continued)

256.bzip2: Kfast_GP=3,NOFLTLD=1,use_rodata,staticclump,xi=8,cfunc,memalias,restp,largepage,funcalign=128
300.twolf: -Kfast_GP=5,GREG,popt,cfunc,staticclump,use_rodata,xi=10,nounroll,largepage,bcopy
(for Forte Developer 6 update 1)
fdo_pre0=rm -rf ‘pwd‘/../feedback.profile ‘pwd‘/SunWS_cache
PASS1=-xprofile=collect:‘pwd‘/../feedback
PASS2=-xprofile=use:‘pwd‘/../feedback
176.gcc: -fast -xcrossfile -W2,-whole -Wc,-Qgsched-trace_late=1,-Qgsched-T4,-Qiselect-funcalign=64
-xarch=v8plus -xprefetch
252.eon: -fast -xcrossfile -xregs=syst -xsafe=mem -Qoption iropt -Mt500,-restrict_g,-restrict
-Qoption cg -Qgsched-trace_late=1,-Qgsched-trace_spec_load=1,-Qgsched-T4 -xarch=v8plus
-lmopt
255.vortex: -fast -xsafe=mem -xcrossfile -W2,-Aheap,-reroll=1,-Aunroll,-Ms1,-Mt500,-Mr6000,-crit
-Wc,-Qdepgraph-early_cross_call=1 -Wc,-Qiselect-funcalign=32 -Wc,-Qpeep-Sh0
-xrestrict -xdepend -Wc,-Qgsched-trace_late=1,-Qgsched-T4 -xarch=v8plus

Portability:
176.gcc: -Dalloca=__builtin_alloca -DHOST_WORDS_BIG_ENDIAN
186.crafty: -DSUN
252.eon: -library=iostream,no%Cstd
253.perlbmk: -DSPEC_CPU2000_SOLARIS -lnsl -lsocket
254.gap: -DSYS_IS_USG -DSYS_HAS_TIME_PROTO -DSYS_HAS_SIGNAL_PROTO
-DSYS_HAS_CALLOC_PROTO -DSYS_HAS_IOCTL_PROTO

Note:
System Tunables: (for /etc/system)
consistent_coloring=1, tune_t_fsflushr=86400, autoup=86400,
shmsys:shminfo_shmmax=268435456, shmsys:shminfo_shmmni=1024, shmsys:shminfo_shmseg=1024
(for /etc/opt/FJSVpnrm/lpg.conf)
TSS=512M, SHMSEGSIZE=256M
ONESTEP=yes was set for all baseline and peak benchmarks.
Feedback directed optimization was used for all baseline and peak benchmarks.

Also used:
-Xa (base and peak, except where noted) for 176.gcc (base only), 181.mcf, 186.crafty, 197.parser (peak only), 254.gap
-dy (base) for all benchmarks except 252.eon, -dy (peak) for all except 176.gcc, 252.eon, 255. vortex
-DWANT_STD_PROTO for 181.mcf (base and peak), -DCPU2000 for 186.crafty (base and peak),
-DSUN -DCPU2000 for 197.parser (peak)
The flags listed above as "also used" were used for the actual compilation,
but they had no effect (-D flags), were the compiler’s default (-Xa), or the compiler’s
default when -Klargepage is used (-dy).
They are not necessary for result reproduction and can be omitted.