

Joyce
Chen
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CA3 Report

Screenshots (diffs)

The screenshot shows a terminal window with the following command history:

```
joycechen@Joyces-MacBook-Pro: ~$ ./procsim -r 2 -f 4 -j 3 -k 2 -l 1 < traces/gcc.100k.trace
52048
joycechen@Joyces-MacBook-Pro: ~$ diff output1.1/gcc.output output.output > diff.txt
joycechen@Joyces-MacBook-Pro: ~$
```

EXPLORER

OPEN EDITORS

- Makefile
- mcf.output output1.1
- debug.txt
- .gitignore
- prosim_driver.cpp
- prosim.hpp (Working Tree)
- Untitled-1
- GROUP 2
- meow.txt
- output.txt
- gcc.100k.trace traces
- gobmk.output output1.1
- OUTLINE
- TIMELINE
- CA3
- .vscode
- output1.1
- goc.log
- goc.output
- gobmk.log
- gobmk.output
- hmmer.log
- hmmer.output
- mcf.log
- mcf.output
- procsim.dSYM
- traces
- gcc.100k.trace
- gobmk.100k.trace
- hmmer.100k.trace
- mcf.100k.trace
- .gitignore
- debug.txt
- diff.txt

output.output

	54684	54686	99998	99990	24998	24999	54682
99999	99991	24998	24999	54683	54684	54686	
		54684	54686		99999	24998	24999
100000	99992	24998	24999	54683	54684	54686	
	54687	54688			100000	99992	24998
100001	99993	24999	25000	54684	54687	54688	
	54685	54687			100001	99993	24999
100002	99994	24999	25000	54684	54685	54687	
	54689	54690			100002	99994	24999
100003	99995	24999	25000	54685	54689	54690	
	54689	54690			100003	99995	24999
100004	99996	24999	25000	54685	54689	54690	
	54688	54689			100004	99996	24999
100005	99997	25000	25001	54686	54688	54689	
	54690	54691			100005	99997	25000
100006	99998	25000	25001	54686	54690	54692	
	54690	54692			100006	99998	25000
100007	99999	25000	25001	54687	54690	54692	
	54688	54689			100007	99999	25000
100008	100000	25000	25001	54687	54688	54689	
	54689	54691			100008	100000	25000
100009	Processor stats:				54689	54691	
100010	Total instructions: 100000				100009	Processor stats:	
100011	Avg Dispatch queue size: 27406.449219				100010	Total instructions: 100000	
100012					100011	Avg Dispatch queue size: 27406.449219	
100013	Maximum Dispatch queue size: 55374				100012		
100014	Avg inst fired per cycle: 1.828421				100013	Maximum Dispatch queue size: 55374	
100015	Avg inst retired per cycle: 1.828421				100014	Avg inst fired per cycle: 1.828421	
100016	Total run time (cycles): 54692				100015	Avg inst retired per cycle: 1.828421	
100017					100016	Total run time (cycles): 54692	

PROBLEMS

- joycechen@Joyces-MacBook-Pro ca3 % ./procsim -r 2 -f 4 -j 3 -k 2 -l 1 < traces/gcc.100k.trace 52048
- joycechen@Joyces-MacBook-Pro ca3 % diff output1.1/gcc.output output.output > diff.txt
- joycechen@Joyces-MacBook-Pro ca3 % ./procsim -r 2 -f 4 -j 3 -k 2 -l 1 < traces/gobmk.100k.trace 54692
- joycechen@Joyces-MacBook-Pro ca3 % diff output1.1/gobmk.output output.output > diff.txt
- joycechen@Joyces-MacBook-Pro ca3 %

zsh

EXPLORER

OPEN EDITORS

- mcf.output output1.1
- debug.txt
- .gitignore
- prosim_driver.cpp
- prosim.hpp (Working Tree)
- Untitled-1
- GROUP 2
- meow.txt
- output.txt
- gcc.100k.trace traces
- gobmk.output output1.1
- hmmer.output output1.1
- OUTLINE
- TIMELINE
- CA3
- .vscode
- output1.1
- goc.log
- goc.output
- gobmk.log
- gobmk.output
- hmmer.log
- hmmer.output
- mcf.log
- mcf.output
- procsim.dSYM
- traces
- gcc.100k.trace
- gobmk.100k.trace
- hmmer.100k.trace
- mcf.100k.trace
- .gitignore
- debug.txt
- diff.txt
- log.txt

output.output

	54627	54629	99999	99991	24998	24999	54625
99999	99991	24998	24999	54625	54630	54632	
		54626	54628		100000	99992	24998
100000	99992	24998	24999	54625	54626	54628	
	54628	54629			100001	99993	24999
100001	99993	24999	25000	54626	54628	54629	
	54628	54629			100002	99994	24999
100002	99994	24999	25000	54626	54628	54630	
	54628	54630			100003	99995	24999
100003	99995	24999	25000	54627	54628	54630	
	54628	54630			100004	99996	24999
100004	99996	24999	25000	54627	54629	54631	
	54629	54631			100005	99997	25000
100005	99997	25000	25001	54628	54631	54633	
	54631	54633			100006	99998	25000
100006	99998	25000	25001	54628	54629	54633	
	54629	54631			100007	99999	25000
100007	99999	25000	25001	54629	54630	54632	
	54630	54632			100008	100000	25000
100008	100000	25000	25001	54629	54630	54633	
	54630	54633			100009	Processor stats:	
100010	Total instructions: 100000				100011	Total instructions: 100000	
100011	Avg Dispatch queue size: 27129.669922				100012	Avg Dispatch queue size: 27129.669922	
100012	Maximum Dispatch queue size: 54225				100013	Maximum Dispatch queue size: 54225	
100013	Avg inst fired per cycle: 1.830396				100014	Avg inst fired per cycle: 1.830396	
100014	Avg inst retired per cycle: 1.830396				100015	Avg inst retired per cycle: 1.830396	
100015	Total run time (cycles): 54633				100016	Total run time (cycles): 54633	
100016					100017		

PROBLEMS

- joycechen@Joyces-MacBook-Pro ca3 % ./procsim -r 2 -f 4 -j 3 -k 2 -l 1 < traces/gcc.100k.trace 52048
- joycechen@Joyces-MacBook-Pro ca3 % diff output1.1/gcc.output output.output > diff.txt
- joycechen@Joyces-MacBook-Pro ca3 % ./procsim -r 2 -f 4 -j 3 -k 2 -l 1 < traces/gobmk.100k.trace 54692
- joycechen@Joyces-MacBook-Pro ca3 % diff output1.1/gobmk.output output.output > diff.txt
- joycechen@Joyces-MacBook-Pro ca3 % diff output1.1/hmmer.output output.output > diff.txt
- joycechen@Joyces-MacBook-Pro ca3 %

zsh

```

Processor stats:
Total instructions: 100000
Avg Dispatch queue size: 26875.132812
Maximum Dispatch queue size: 53688
Avg inst fired per cycle: 1.850995
Avg inst retired per cycle: 1.850995
Total run time (cycles): 54025

Processor stats:
Total instructions: 100000
Avg Dispatch queue size: 26875.132812
Maximum Dispatch queue size: 53688
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Total run time (cycles): 54025

```

The terminal shows the execution of benchmarks (mcf, gcc, gobmk) with configuration ca3 and output comparison. The results show similar performance metrics across all benchmarks.

gcc.100k.trace

Config	Total instructions	Avg Dispatch Queue Size	Maximum Dispatch queue size	Avg inst fired per cycle	Avg inst retired per cycle	Total run time (cycles)
Default	100000	26039.0722 66	51965	1.921303	1.921303	52048
R=4	100000	19915.8613 28	861328	2.422363	2.422363	41282
N=8	100000	38047.2187 50	76112	1.921303	1.921303	52048
R=4, N=8	100000	35055.6328 12	70306	2.422363	2.422363	41282

gobmk.100k.trace

Config	Total instructions	Avg Dispatch Queue Size	Maximum Dispatch queue size	Avg inst fired per cycle	Avg inst retired per cycle	Total run time (cycles)

Default	100000	27406.4492 19	55374	1.828421	1.828421	54692
R=4	100000	21736.1171 88	44208	2.250124	2.250124	44442
N=8	100000	38834.0820 31	75931	1.828421	1.828421	54692
R=4, N=8	100000	35797.9453 12	70561	2.250174	2.250174	44441

hmmer.100k.trace

Config	Total instructions	Avg Dispatch Queue Size	Maximum Dispatch queue size	Avg inst fired per cycle	Avg inst retired per cycle	Total run time (cycles)
Default	100000	27129.6699 22	54225	1.830396	1.830396	54633
R=4	100000	22034.1464 84	43960	2.240244	2.240244	44638
N=8	100000	38569.6406 25	77148	1.830396	1.830396	54633
R=4, N=8	100000	36035.6718 75	71985	2.240244	2.240244	44638

mcf.100k.trace

Config	Total instructions	Avg Dispatch Queue Size	Maximum Dispatch queue size	Avg inst fired per cycle	Avg inst retired per cycle	Total run time (cycles)
Default	100000	26875.1328 12	53688	1.850995	1.850995	54025
R=4	100000	21867.1835 94	43689	2.252810	2.252810	44389
N=8	100000	38443.8515 62	76899	1.850995	1.850995	54025

R=4, N=8	100000	35947.2500 00	71849	2.252810	2.252810	44389
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