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omnetpp-mem32\_All-2way      Simulation Results

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Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

Total cycles for all activities:

Cycles for reads	=	27089750968	[42.96%]
Cycles for writes	=	6607499064	[10.48%]
Cycles for inst	=	29361434731	[46.56%]
Total time	=	63058684763	

Average cycles per activity:

Read	=	13.48
Write	=	5.34
Inst	=	9.34

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

Memory level: L1i

Hits	=	11123145966	[97.05%]
Misses	=	338100123	[2.95%]
Total	=	11461246089	

Kickouts = 338099867, Dirty kickouts = 0, Transfers = 338100123

Memory level: L1d

Hits	=	5669434506	[95.62%]
Misses	=	259457110	[4.38%]
Total	=	5928891616	

Kickouts = 259456854, Dirty kickouts = 105849456, Transfers = 259457110

Memory level: L2

Hits	=	453267900	[64.44%]
Misses	=	250138789	[35.56%]
Total	=	703406689	

Kickouts = 250138277, Dirty kickouts = 60980869, Transfers = 250138789

Cost analysis:

L1i cache cost	=	\$400
L1d cache cost	=	\$400
L2 cache cost	=	\$100
Memory cost	=	\$175
Total cost	=	\$1075

## Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

## Total cycles for all activities:

Cycles for reads	=	23619135621	[43.27%]
Cycles for writes	=	6009677710	[11.01%]
Cycles for inst	=	24956665469	[45.72%]
Total time	=	54585478800	

## Average cycles per activity:

Read	=	11.75
Write	=	4.85
Inst	=	8.08

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

## Memory level: L1i

Hits	=	11176886229	[97.52%]
Misses	=	284359860	[2.48%]
Total	=	11461246089	
Kickouts	=	284359604, Dirty kickouts = 0, Transfers = 284359860	

## Memory level: L1d

Hits	=	5710864475	[96.32%]
Misses	=	218027141	[3.68%]
Total	=	5928891616	
Kickouts	=	218026885, Dirty kickouts = 85447461, Transfers = 218027141	

## Memory level: L2

Hits	=	387962332	[66.00%]
Misses	=	199872130	[34.00%]
Total	=	587834462	
Kickouts	=	199871618, Dirty kickouts = 51135782, Transfers = 199872130	

## Cost analysis:

L1i cache cost	=	\$600
L1d cache cost	=	\$600
L2 cache cost	=	\$150
Memory cost	=	\$175
Total cost	=	\$1525

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omnetpp-mem32\_All-FA      Simulation Results

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Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

Total cycles for all activities:

Cycles for reads	=	20246411607	[42.79%]
Cycles for writes	=	5637317334	[11.91%]
Cycles for inst	=	21432391201	[45.30%]
Total time	=	47316120142	

Average cycles per activity:

Read	=	10.08
Write	=	4.55
Inst	=	7.01

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

Memory level: L1i

Hits	=	11259288301	[98.24%]
Misses	=	201957788	[1.76%]
Total	=	11461246089	

Kickouts = 201957532, Dirty kickouts = 0, Transfers = 201957788

Memory level: L1d

Hits	=	5753056729	[97.03%]
Misses	=	175834887	[2.97%]
Total	=	5928891616	

Kickouts = 175834631, Dirty kickouts = 72136579, Transfers = 175834887

Memory level: L2

Hits	=	288582036	[64.14%]
Misses	=	161347218	[35.86%]
Total	=	449929254	

Kickouts = 161346706, Dirty kickouts = 44738929, Transfers = 161347218

Cost analysis:

L1i cache cost	=	\$1800
L1d cache cost	=	\$1800
L2 cache cost	=	\$500
Memory cost	=	\$175
Total cost	=	\$4275

## Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

## Total cycles for all activities:

Cycles for reads	=	35537444002	[44.39%]
Cycles for writes	=	8428762424	[10.53%]
Cycles for inst	=	36094136827	[45.08%]
Total time	=	80060343253	

## Average cycles per activity:

Read	=	17.69
Write	=	6.81
Inst	=	11.86

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

## Memory level: L1i

Hits	=	11006133158	[96.03%]
Misses	=	455112931	[3.97%]
Total	=	11461246089	

Kickouts = 455112675, Dirty kickouts = 0, Transfers = 455112931

## Memory level: L1d

Hits	=	5562301532	[93.82%]
Misses	=	366590084	[6.18%]
Total	=	5928891616	

Kickouts = 366589828, Dirty kickouts = 162590750, Transfers = 366590084

## Memory level: L2

Hits	=	643964024	[65.42%]
Misses	=	340329741	[34.58%]
Total	=	984293765	

Kickouts = 340329229, Dirty kickouts = 83598965, Transfers = 340329741

## Cost analysis:

L1i cache cost	=	\$200
L1d cache cost	=	\$200
L2 cache cost	=	\$50
Memory cost	=	\$175
Total cost	=	\$625

Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

Total cycles for all activities:

Cycles for reads	=	29365411704	[43.34%]
Cycles for writes	=	7057798820	[10.42%]
Cycles for inst	=	31338104215	[46.25%]
Total time	=	67761314739	

Average cycles per activity:

Read	=	14.61
Write	=	5.70
Inst	=	10.03

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

Memory level: L1i

Hits	=	11123145966	[97.05%]
Misses	=	338100123	[2.95%]
Total	=	11461246089	
Kickouts	=	338099867, Dirty kickouts = 0, Transfers = 338100123	

Memory level: L1d

Hits	=	5669434506	[95.62%]
Misses	=	259457110	[4.38%]
Total	=	5928891616	
Kickouts	=	259456854, Dirty kickouts = 105849456, Transfers = 259457110	

Memory level: L2

Hits	=	414993528	[59.00%]
Misses	=	288413161	[41.00%]
Total	=	703406689	
Kickouts	=	288412649, Dirty kickouts = 66670847, Transfers = 288413161	

Cost analysis:

L1i cache cost	=	\$400
L1d cache cost	=	\$400
L2 cache cost	=	\$50
Memory cost	=	\$175
Total cost	=	\$1025

## Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

## Total cycles for all activities:

Cycles for reads	=	39565087742	[45.80%]
Cycles for writes	=	8930456313	[10.34%]
Cycles for inst	=	37884706699	[43.86%]
Total time	=	86380250754	

## Average cycles per activity:

Read	=	19.69
Write	=	7.21
Inst	=	12.79

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

## Memory level: L1i

Hits	=	11006133158	[96.03%]
Misses	=	455112931	[3.97%]
Total	=	11461246089	
Kickouts	=	455112675, Dirty kickouts = 0, Transfers = 455112931	

## Memory level: L1d

Hits	=	5423480899	[91.48%]
Misses	=	505410717	[8.52%]
Total	=	5928891616	
Kickouts	=	505410589, Dirty kickouts = 217210609, Transfers = 505410717	

## Memory level: L2

Hits	=	814325803	[69.14%]
Misses	=	363408454	[30.86%]
Total	=	1177734257	
Kickouts	=	363407942, Dirty kickouts = 87599940, Transfers = 363408454	

## Cost analysis:

L1i cache cost	=	\$200
L1d cache cost	=	\$100
L2 cache cost	=	\$50
Memory cost	=	\$175
Total cost	=	\$525

## Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

## Total cycles for all activities:

Cycles for reads	=	36281944810	[41.61%]
Cycles for writes	=	8534545052	[9.79%]
Cycles for inst	=	42381346043	[48.60%]
Total time	=	87197835905	

## Average cycles per activity:

Read	=	18.06
Write	=	6.89
Inst	=	12.91

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

## Memory level: L1i

Hits	=	10791448034	[94.16%]
Misses	=	669798055	[5.84%]
Total	=	11461246089	

Kickouts = 669797927, Dirty kickouts = 0, Transfers = 669798055

## Memory level: L1d

Hits	=	5562301532	[93.82%]
Misses	=	366590084	[6.18%]
Total	=	5928891616	

Kickouts = 366589828, Dirty kickouts = 162590750, Transfers = 366590084

## Memory level: L2

Hits	=	830511583	[69.27%]
Misses	=	368467306	[30.73%]
Total	=	1198978889	

Kickouts = 368466794, Dirty kickouts = 85941999, Transfers = 368467306

## Cost analysis:

L1i cache cost	=	\$100
L1d cache cost	=	\$200
L2 cache cost	=	\$50
Memory cost	=	\$175
Total cost	=	\$525

## Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

## Total cycles for all activities:

Cycles for reads	=	40736192566	[43.05%]
Cycles for writes	=	9055787789	[9.57%]
Cycles for inst	=	44831686843	[47.38%]
Total time	=	94623667198	

## Average cycles per activity:

Read	=	20.27
Write	=	7.32
Inst	=	14.01

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

## Memory level: L1i

Hits	=	10791448034	[94.16%]
Misses	=	669798055	[5.84%]
Total	=	11461246089	

Kickouts = 669797927, Dirty kickouts = 0, Transfers = 669798055

## Memory level: L1d

Hits	=	5423480899	[91.48%]
Misses	=	505410717	[8.52%]
Total	=	5928891616	

Kickouts = 505410589, Dirty kickouts = 217210609, Transfers = 505410717

## Memory level: L2

Hits	=	992116313	[71.25%]
Misses	=	400303068	[28.75%]
Total	=	1392419381	

Kickouts = 400302556, Dirty kickouts = 91544599, Transfers = 400303068

## Cost analysis:

L1i cache cost	=	\$100
L1d cache cost	=	\$100
L2 cache cost	=	\$50
Memory cost	=	\$175
Total cost	=	\$425



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omnetpp-mem32\_L2-4way      Simulation Results

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Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

Total cycles for all activities:

Cycles for reads	=	25056751184	[42.73%]
Cycles for writes	=	6345933748	[10.82%]
Cycles for inst	=	27243529031	[46.45%]
Total time	=	58646213963	

Average cycles per activity:

Read	=	12.47
Write	=	5.13
Inst	=	8.68

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

Memory level: L1i

Hits	=	11123145966	[97.05%]
Misses	=	338100123	[2.95%]
Total	=	11461246089	
Kickouts	=	338099867, Dirty kickouts = 0, Transfers = 338100123	

Memory level: L1d

Hits	=	5669434506	[95.62%]
Misses	=	259457110	[4.38%]
Total	=	5928891616	
Kickouts	=	259456854, Dirty kickouts = 105849456, Transfers = 259457110	

Memory level: L2

Hits	=	488279575	[69.42%]
Misses	=	215127114	[30.58%]
Total	=	703406689	
Kickouts	=	215126602, Dirty kickouts = 54668770, Transfers = 215127114	

Cost analysis:

L1i cache cost	=	\$400
L1d cache cost	=	\$400
L2 cache cost	=	\$150
Memory cost	=	\$175
Total cost	=	\$1125

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omnetpp-mem32\_L2-Big      Simulation Results

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Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

Total cycles for all activities:

Cycles for reads	=	23606286108	[42.14%]
Cycles for writes	=	5998933416	[10.71%]
Cycles for inst	=	26417732823	[47.16%]
Total time	=	56022952347	

Average cycles per activity:

Read	=	11.75
Write	=	4.85
Inst	=	8.30

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

Memory level: L1i

Hits	=	11123145966	[97.05%]
Misses	=	338100123	[2.95%]
Total	=	11461246089	
Kickouts	=	338099867, Dirty kickouts = 0, Transfers = 338100123	

Memory level: L1d

Hits	=	5669434506	[95.62%]
Misses	=	259457110	[4.38%]
Total	=	5928891616	
Kickouts	=	259456854, Dirty kickouts = 105849456, Transfers = 259457110	

Memory level: L2

Hits	=	508143677	[72.24%]
Misses	=	195263012	[27.76%]
Total	=	703406689	
Kickouts	=	195261988, Dirty kickouts = 49889384, Transfers = 195263012	

Cost analysis:

L1i cache cost	=	\$400
L1d cache cost	=	\$400
L2 cache cost	=	\$100
Memory cost	=	\$175
Total cost	=	\$1075

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omnetpp-mem64\_All-2way      Simulation Results

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Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

Total cycles for all activities:

Cycles for reads	=	23694390148	[41.69%]
Cycles for writes	=	5998258184	[10.55%]
Cycles for inst	=	27143643271	[47.76%]
Total time	=	56836291603	

Average cycles per activity:

Read	=	11.79
Write	=	4.85
Inst	=	8.42

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

Memory level: L1i

Hits	=	11123145966	[97.05%]
Misses	=	338100123	[2.95%]
Total	=	11461246089	
Kickouts	=	338099867, Dirty kickouts = 0, Transfers = 338100123	

Memory level: L1d

Hits	=	5669434506	[95.62%]
Misses	=	259457110	[4.38%]
Total	=	5928891616	
Kickouts	=	259456854, Dirty kickouts = 105849456, Transfers = 259457110	

Memory level: L2

Hits	=	453267900	[64.44%]
Misses	=	250138789	[35.56%]
Total	=	703406689	
Kickouts	=	250138277, Dirty kickouts = 60980869, Transfers = 250138789	

Cost analysis:

L1i cache cost	=	\$400
L1d cache cost	=	\$400
L2 cache cost	=	\$100
Memory cost	=	\$275
Total cost	=	\$1175

## Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

## Total cycles for all activities:

Cycles for reads	=	20706193281	[41.78%]
Cycles for writes	=	5476576950	[11.05%]
Cycles for inst	=	23382550329	[47.18%]
Total time	=	49565320560	

## Average cycles per activity:

Read	=	10.31
Write	=	4.42
Inst	=	7.34

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

## Memory level: L1i

Hits	=	11176886229	[97.52%]
Misses	=	284359860	[2.48%]
Total	=	11461246089	

Kickouts = 284359604, Dirty kickouts = 0, Transfers = 284359860

## Memory level: L1d

Hits	=	5710864475	[96.32%]
Misses	=	218027141	[3.68%]
Total	=	5928891616	

Kickouts = 218026885, Dirty kickouts = 85447461, Transfers = 218027141

## Memory level: L2

Hits	=	387962332	[66.00%]
Misses	=	199872130	[34.00%]
Total	=	587834462	

Kickouts = 199871618, Dirty kickouts = 51135782, Transfers = 199872130

## Cost analysis:

L1i cache cost	=	\$600
L1d cache cost	=	\$600
L2 cache cost	=	\$150
Memory cost	=	\$275
Total cost	=	\$1625

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omnetpp-mem64\_All-FA      Simulation Results

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Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

Total cycles for all activities:

Cycles for reads	=	17790982627	[41.19%]
Cycles for writes	=	5163179214	[11.95%]
Cycles for inst	=	20240235361	[46.86%]
Total time	=	43194397202	

Average cycles per activity:

Read	=	8.85
Write	=	4.17
Inst	=	6.40

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

Memory level: L1i

Hits	=	11259288301	[98.24%]
Misses	=	201957788	[1.76%]
Total	=	11461246089	

Kickouts = 201957532, Dirty kickouts = 0, Transfers = 201957788

Memory level: L1d

Hits	=	5753056729	[97.03%]
Misses	=	175834887	[2.97%]
Total	=	5928891616	

Kickouts = 175834631, Dirty kickouts = 72136579, Transfers = 175834887

Memory level: L2

Hits	=	288582036	[64.14%]
Misses	=	161347218	[35.86%]
Total	=	449929254	

Kickouts = 161346706, Dirty kickouts = 44738929, Transfers = 161347218

Cost analysis:

L1i cache cost	=	\$1800
L1d cache cost	=	\$1800
L2 cache cost	=	\$500
Memory cost	=	\$275
Total cost	=	\$4375

## Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

## Total cycles for all activities:

Cycles for reads	=	30996588482	[43.30%]
Cycles for writes	=	7566324324	[10.57%]
Cycles for inst	=	33018856327	[46.13%]
Total time	=	71581769133	

## Average cycles per activity:

Read	=	15.43
Write	=	6.11
Inst	=	10.60

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

## Memory level: L1i

Hits	=	11006133158	[96.03%]
Misses	=	455112931	[3.97%]
Total	=	11461246089	
Kickouts	=	455112675, Dirty kickouts = 0, Transfers = 455112931	

## Memory level: L1d

Hits	=	5562301532	[93.82%]
Misses	=	366590084	[6.18%]
Total	=	5928891616	
Kickouts	=	366589828, Dirty kickouts = 162590750, Transfers = 366590084	

## Memory level: L2

Hits	=	643964024	[65.42%]
Misses	=	340329741	[34.58%]
Total	=	984293765	
Kickouts	=	340329229, Dirty kickouts = 83598965, Transfers = 340329741	

## Cost analysis:

L1i cache cost	=	\$200
L1d cache cost	=	\$200
L2 cache cost	=	\$50
Memory cost	=	\$275
Total cost	=	\$725

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omnetpp-mem64\_L1-2way          Simulation Results

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Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

Total cycles for all activities:

Cycles for reads	=	25540896244	[42.11%]
Cycles for writes	=	6363563800	[10.49%]
Cycles for inst	=	28755174535	[47.40%]
Total time	=	60659634579	

Average cycles per activity:

Read	=	12.71
Write	=	5.14
Inst	=	8.98

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

Memory level: L1i

Hits	=	11123145966	[97.05%]
Misses	=	338100123	[2.95%]
Total	=	11461246089	
Kickouts	=	338099867, Dirty kickouts = 0, Transfers = 338100123	

Memory level: L1d

Hits	=	5669434506	[95.62%]
Misses	=	259457110	[4.38%]
Total	=	5928891616	
Kickouts	=	259456854, Dirty kickouts = 105849456, Transfers = 259457110	

Memory level: L2

Hits	=	414993528	[59.00%]
Misses	=	288413161	[41.00%]
Total	=	703406689	
Kickouts	=	288412649, Dirty kickouts = 66670847, Transfers = 288413161	

Cost analysis:

L1i cache cost	=	\$400
L1d cache cost	=	\$400
L2 cache cost	=	\$50
Memory cost	=	\$275
Total cost	=	\$1125

## Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

## Total cycles for all activities:

Cycles for reads	=	34812510362	[45.00%]
Cycles for writes	=	8078903953	[10.44%]
Cycles for inst	=	34468668559	[44.56%]
Total time	=	77360082874	

## Average cycles per activity:

Read	=	17.33
Write	=	6.53
Inst	=	11.46

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

## Memory level: L1i

Hits	=	11006133158	[96.03%]
Misses	=	455112931	[3.97%]
Total	=	11461246089	
Kickouts	=	455112675, Dirty kickouts = 0, Transfers = 455112931	

## Memory level: L1d

Hits	=	5423480899	[91.48%]
Misses	=	505410717	[8.52%]
Total	=	5928891616	
Kickouts	=	505410589, Dirty kickouts = 217210609, Transfers = 505410717	

## Memory level: L2

Hits	=	814325803	[69.14%]
Misses	=	363408454	[30.86%]
Total	=	1177734257	
Kickouts	=	363407942, Dirty kickouts = 87599940, Transfers = 363408454	

## Cost analysis:

L1i cache cost	=	\$200
L1d cache cost	=	\$100
L2 cache cost	=	\$50
Memory cost	=	\$275
Total cost	=	\$625



## Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

## Total cycles for all activities:

Cycles for reads	=	31605274530	[40.46%]
Cycles for writes	=	7652816852	[9.80%]
Cycles for inst	=	38851558423	[49.74%]
Total time	=	78109649805	

## Average cycles per activity:

Read	=	15.73
Write	=	6.18
Inst	=	11.57

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

## Memory level: L1i

Hits	=	10791448034	[94.16%]
Misses	=	669798055	[5.84%]
Total	=	11461246089	

Kickouts = 669797927, Dirty kickouts = 0, Transfers = 669798055

## Memory level: L1d

Hits	=	5562301532	[93.82%]
Misses	=	366590084	[6.18%]
Total	=	5928891616	

Kickouts = 366589828, Dirty kickouts = 162590750, Transfers = 366590084

## Memory level: L2

Hits	=	830511583	[69.27%]
Misses	=	368467306	[30.73%]
Total	=	1198978889	

Kickouts = 368466794, Dirty kickouts = 85941999, Transfers = 368467306

## Cost analysis:

L1i cache cost	=	\$100
L1d cache cost	=	\$200
L2 cache cost	=	\$50
Memory cost	=	\$275
Total cost	=	\$625

## Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

## Total cycles for all activities:

Cycles for reads	=	35769143226	[42.19%]
Cycles for writes	=	8181363249	[9.65%]
Cycles for inst	=	40836207383	[48.16%]
Total time	=	84786713858	

## Average cycles per activity:

Read	=	17.80
Write	=	6.61
Inst	=	12.56

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

## Memory level: L1i

Hits	=	10791448034	[94.16%]
Misses	=	669798055	[5.84%]
Total	=	11461246089	

Kickouts = 669797927, Dirty kickouts = 0, Transfers = 669798055

## Memory level: L1d

Hits	=	5423480899	[91.48%]
Misses	=	505410717	[8.52%]
Total	=	5928891616	

Kickouts = 505410589, Dirty kickouts = 217210609, Transfers = 505410717

## Memory level: L2

Hits	=	992116313	[71.25%]
Misses	=	400303068	[28.75%]
Total	=	1392419381	

Kickouts = 400302556, Dirty kickouts = 91544599, Transfers = 400303068

## Cost analysis:

L1i cache cost	=	\$100
L1d cache cost	=	\$100
L2 cache cost	=	\$50
Memory cost	=	\$275
Total cost	=	\$525

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omnetpp-mem64\_L2-4way      Simulation Results

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Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

Total cycles for all activities:

Cycles for reads	=	22043371564	[41.40%]
Cycles for writes	=	5785888928	[10.87%]
Cycles for inst	=	25421035791	[47.74%]
Total time	=	53250296283	

Average cycles per activity:

Read	=	10.97
Write	=	4.67
Inst	=	7.89

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

Memory level: L1i

Hits	=	11123145966	[97.05%]
Misses	=	338100123	[2.95%]
Total	=	11461246089	
Kickouts	=	338099867, Dirty kickouts = 0, Transfers = 338100123	

Memory level: L1d

Hits	=	5669434506	[95.62%]
Misses	=	259457110	[4.38%]
Total	=	5928891616	
Kickouts	=	259456854, Dirty kickouts = 105849456, Transfers = 259457110	

Memory level: L2

Hits	=	488279575	[69.42%]
Misses	=	215127114	[30.58%]
Total	=	703406689	
Kickouts	=	215126602, Dirty kickouts = 54668770, Transfers = 215127114	

Cost analysis:

L1i cache cost	=	\$400
L1d cache cost	=	\$400
L2 cache cost	=	\$150
Memory cost	=	\$275
Total cost	=	\$1225

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omnetpp-mem64\_L2-Big      Simulation Results

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Number of reference types:

Number of reads	=	2009285423	[20.09%]
Number of writes	=	1237898222	[12.38%]
Number of inst	=	6752816355	[67.53%]
Total	=	10000000000	

Total cycles for all activities:

Cycles for reads	=	20863244388	[40.81%]
Cycles for writes	=	5504090456	[10.77%]
Cycles for inst	=	24752569583	[48.42%]
Total time	=	51119904427	

Average cycles per activity:

Read	=	10.38
Write	=	4.45
Inst	=	7.57

Ideal: Exec. Time = 16752816355; CPI = 2.48

Ideal mis-aligned: Exec. Time = 26618750504; CPI = 3.94

Memory level: L1i

Hits	=	11123145966	[97.05%]
Misses	=	338100123	[2.95%]
Total	=	11461246089	

Kickouts = 338099867, Dirty kickouts = 0, Transfers = 338100123

Memory level: L1d

Hits	=	5669434506	[95.62%]
Misses	=	259457110	[4.38%]
Total	=	5928891616	

Kickouts = 259456854, Dirty kickouts = 105849456, Transfers = 259457110

Memory level: L2

Hits	=	508143677	[72.24%]
Misses	=	195263012	[27.76%]
Total	=	703406689	

Kickouts = 195261988, Dirty kickouts = 49889384, Transfers = 195263012

Cost analysis:

L1i cache cost	=	\$400
L1d cache cost	=	\$400
L2 cache cost	=	\$100
Memory cost	=	\$275
Total cost	=	\$1175