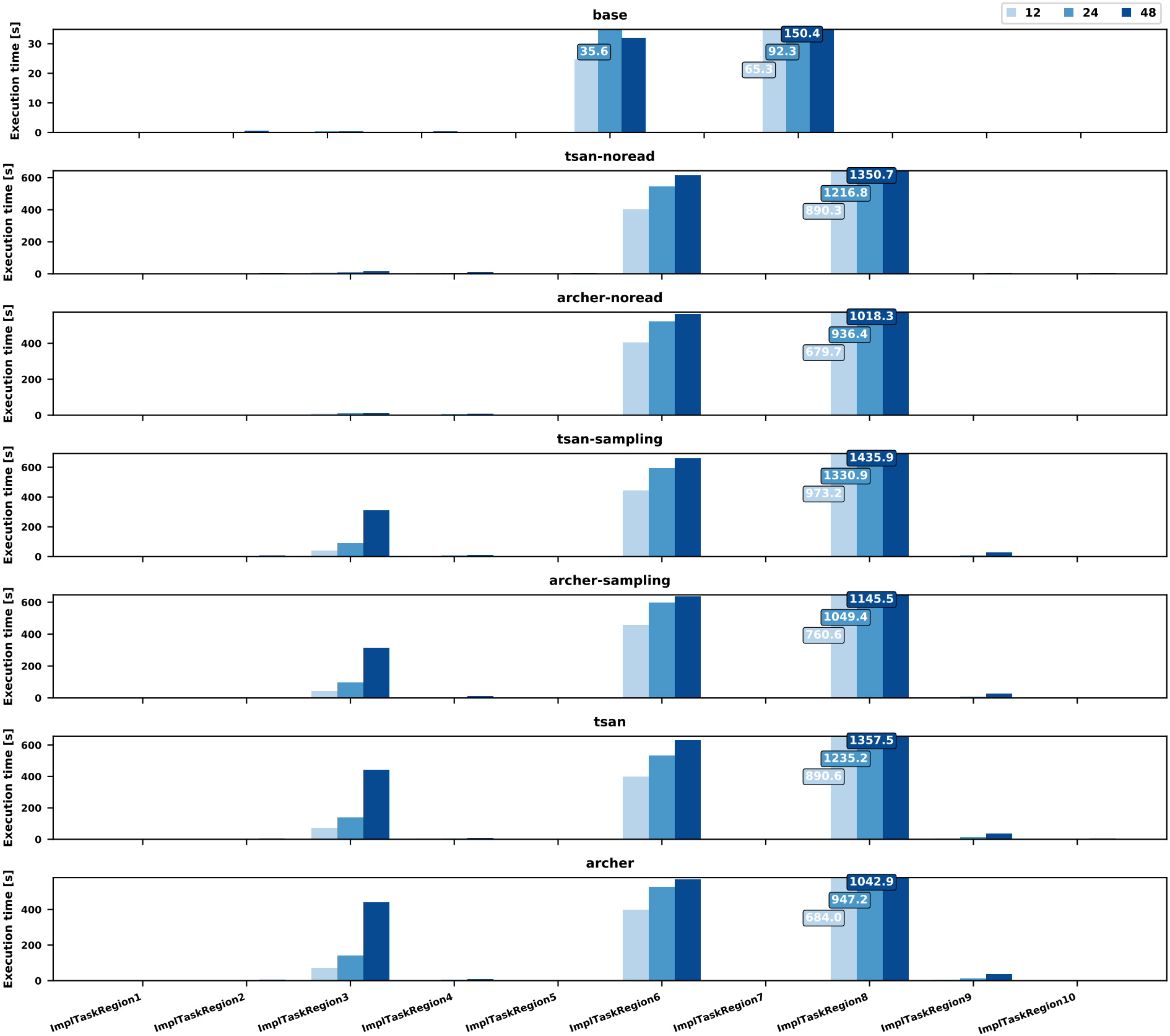
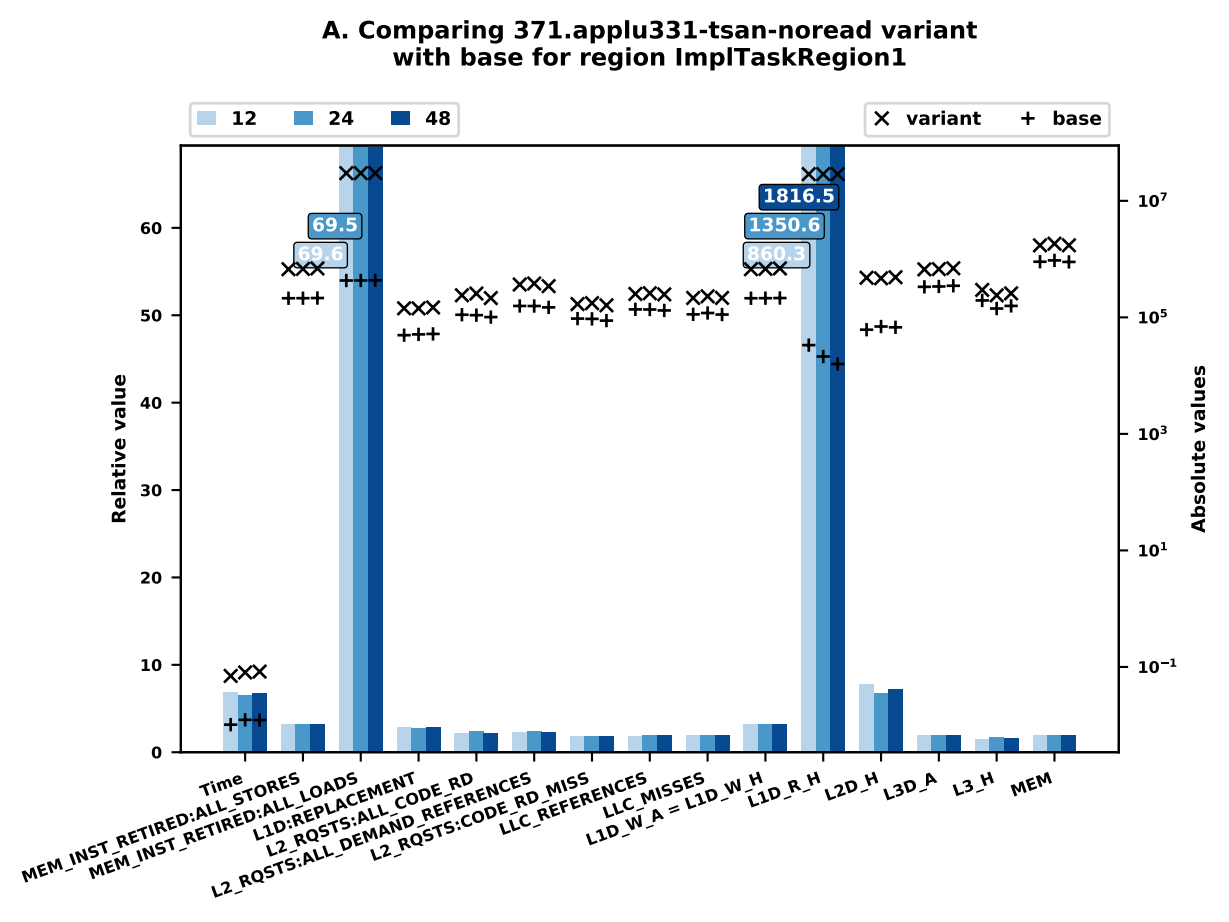
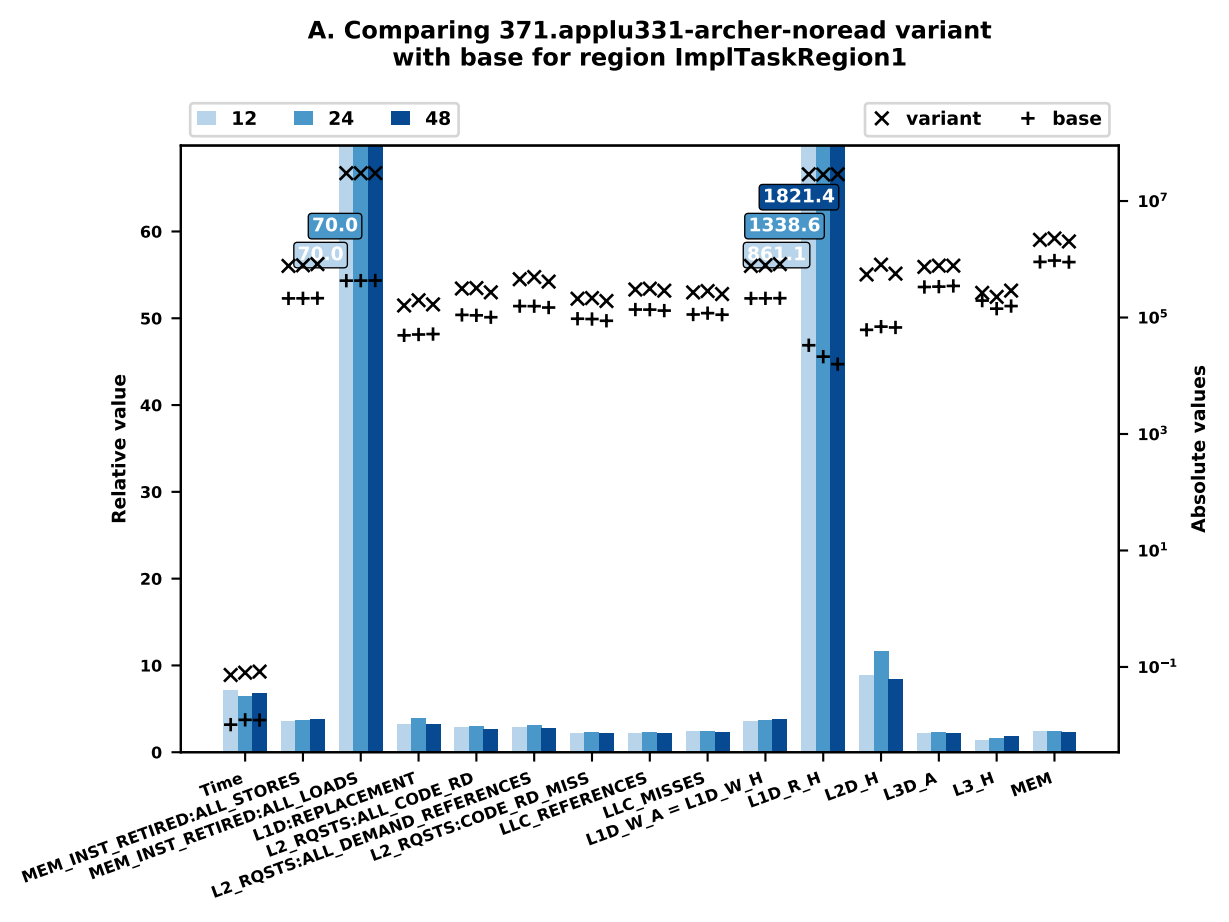
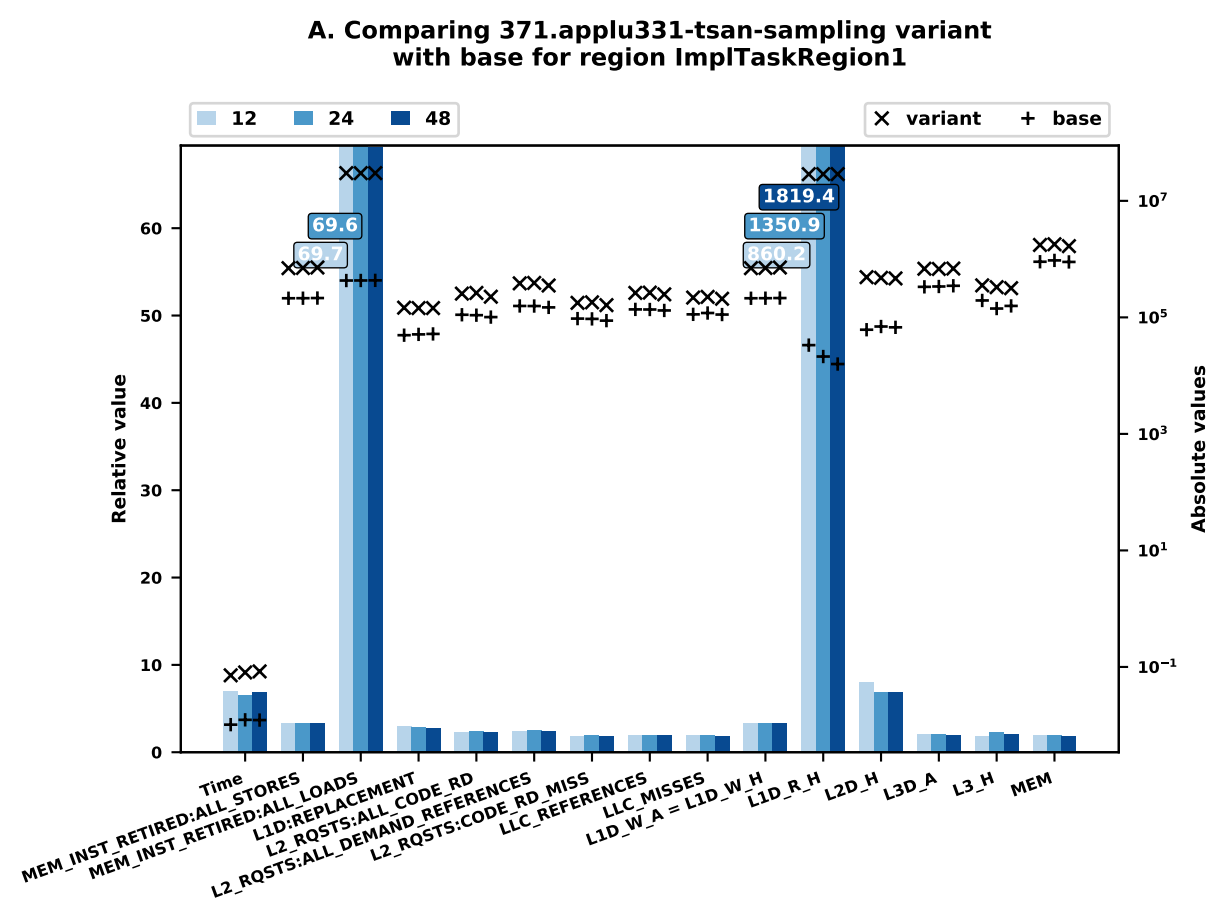
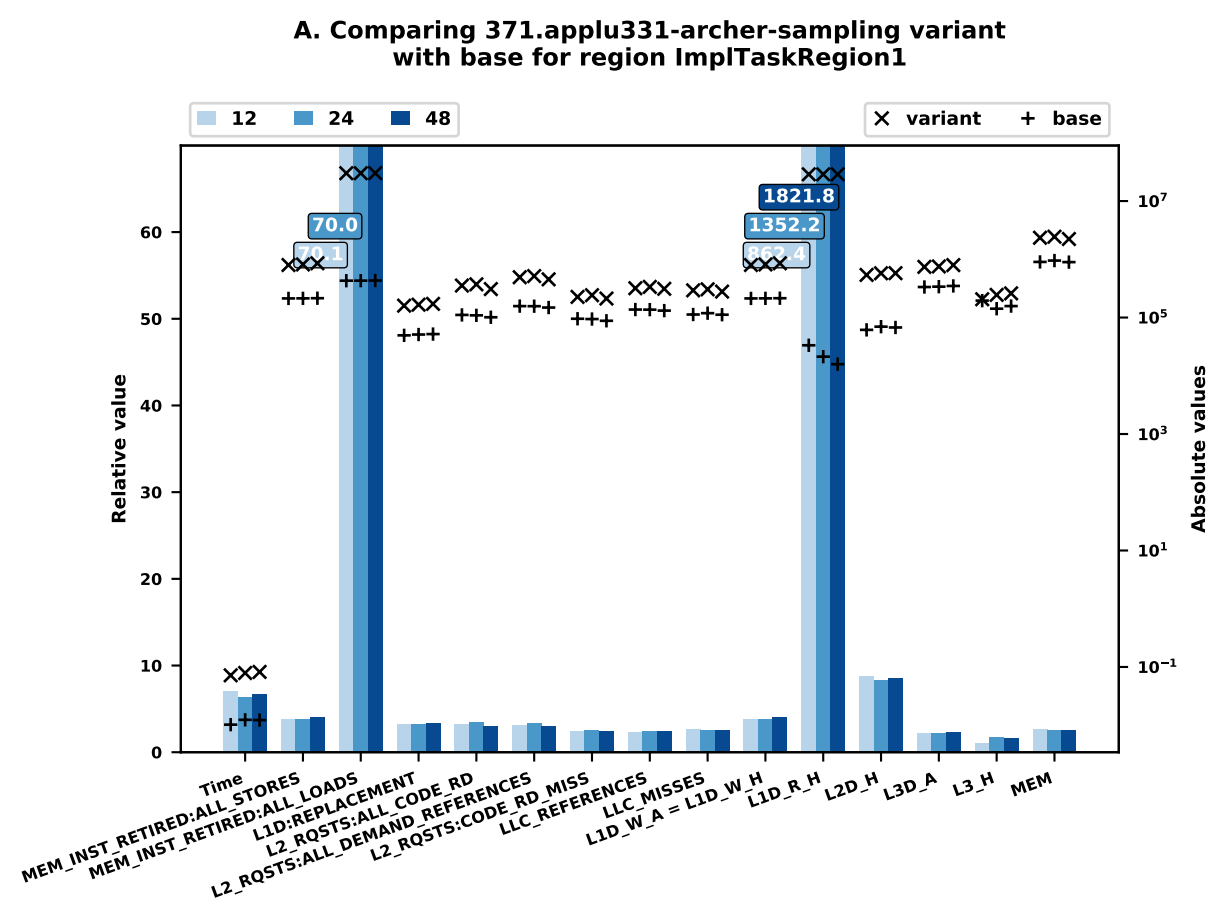
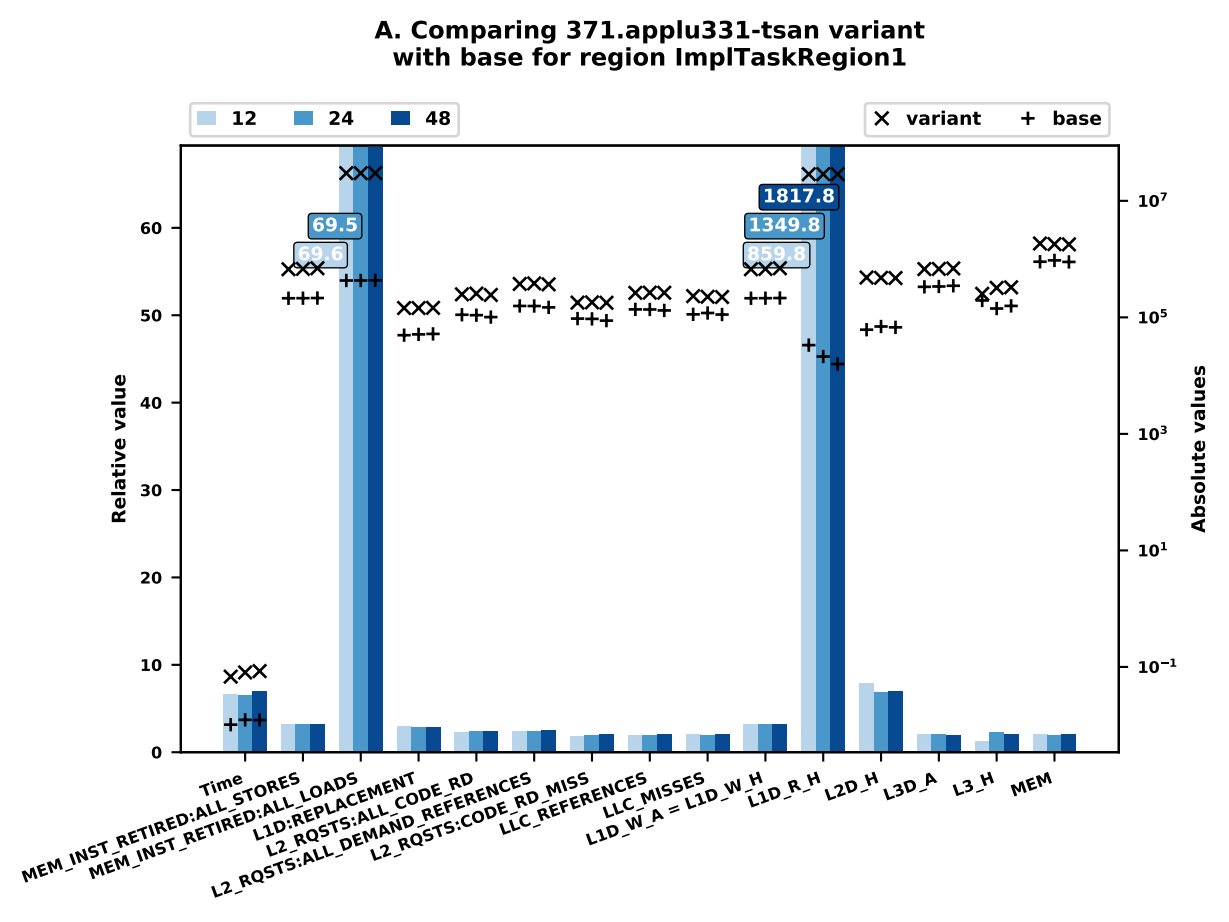

12
24
48
base
Execution time [s]
35.6
65.3
92.3
150.4
tsan-noread
890.3
1216.8
1350.7
archer-noread
679.7
936.4
1018.3
tsan-sampling
973.2
1330.9
1435.9
archer-sampling
760.6
1049.4
1145.5
tsan
890.6
1235.2
1357.5
archer
684.0
947.2
1042.9
ImplTaskRegion1
ImplTaskRegion2
ImplTaskRegion3
ImplTaskRegion4
ImplTaskRegion5
ImplTaskRegion6
ImplTaskRegion7
ImplTaskRegion8
ImplTaskRegion9
ImplTaskRegion10

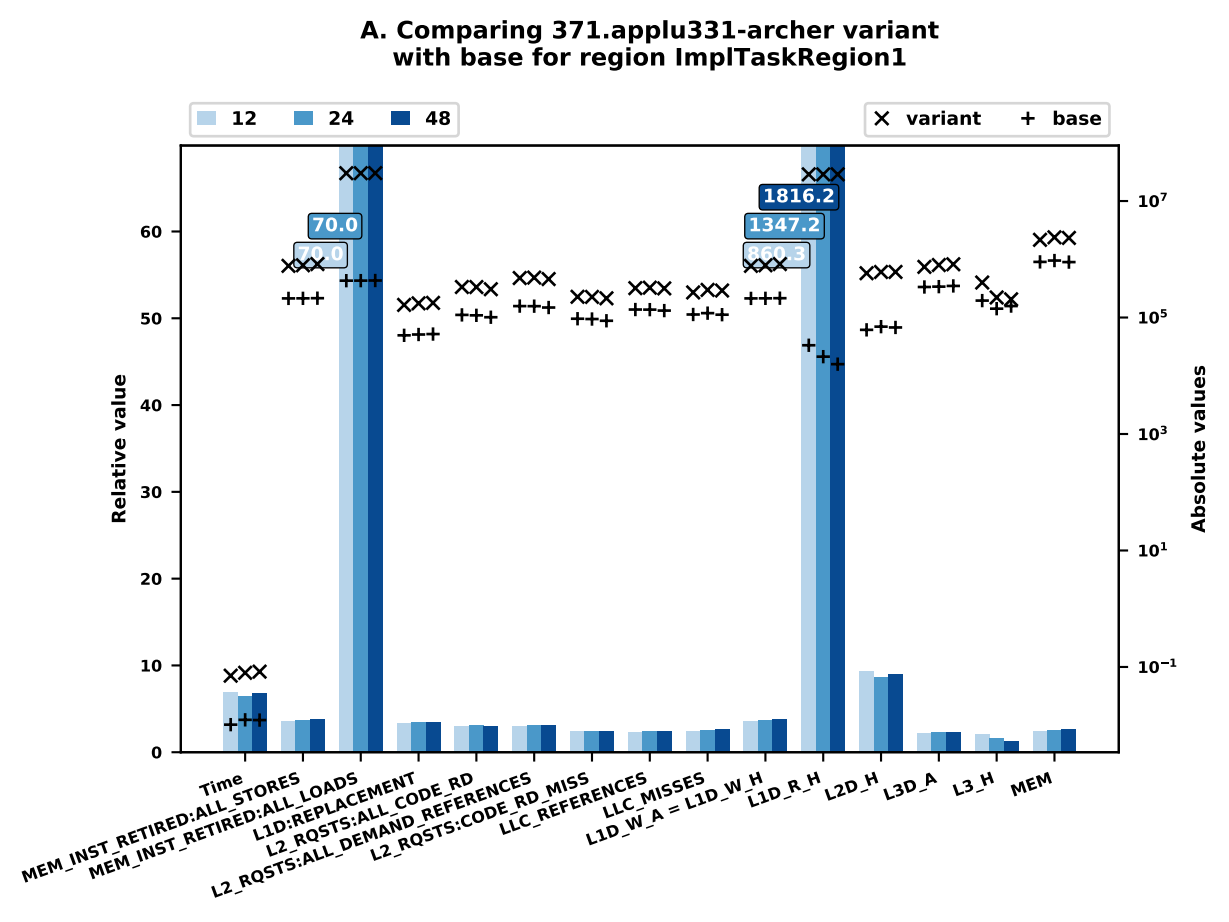

A. Comparing 371.applu331-tsan-noread variant
with base for region ImplTaskRegion1
12
24
48
variant
base
Relative value
Absolute values
69.5
89.6
1816.5
1350.6
860.3
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

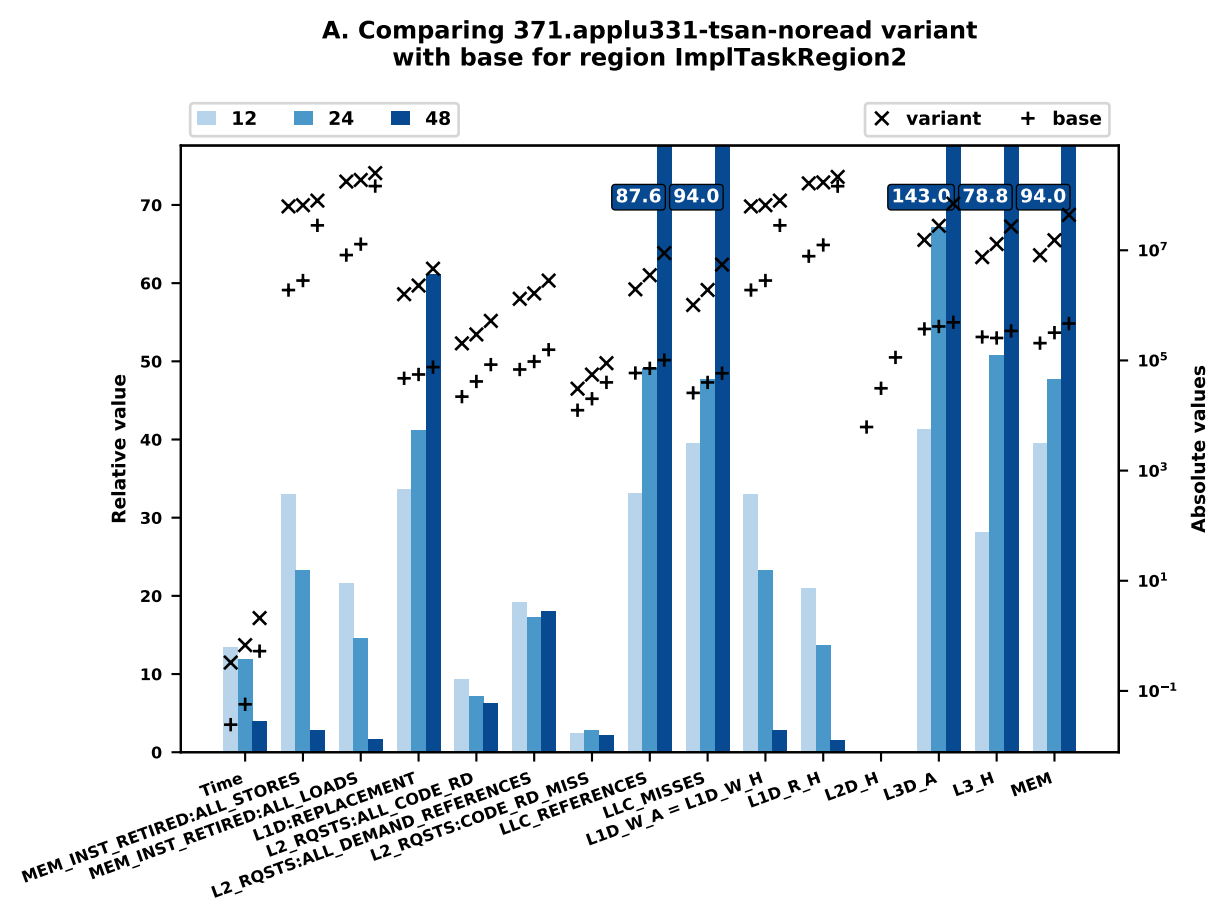

A. Comparing 371.applu331-archer-noread variant
with base for region ImplTaskRegion1
12
24
48
variant
base
Relative value
Absolute values
70.0
1821.4
1338.6
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

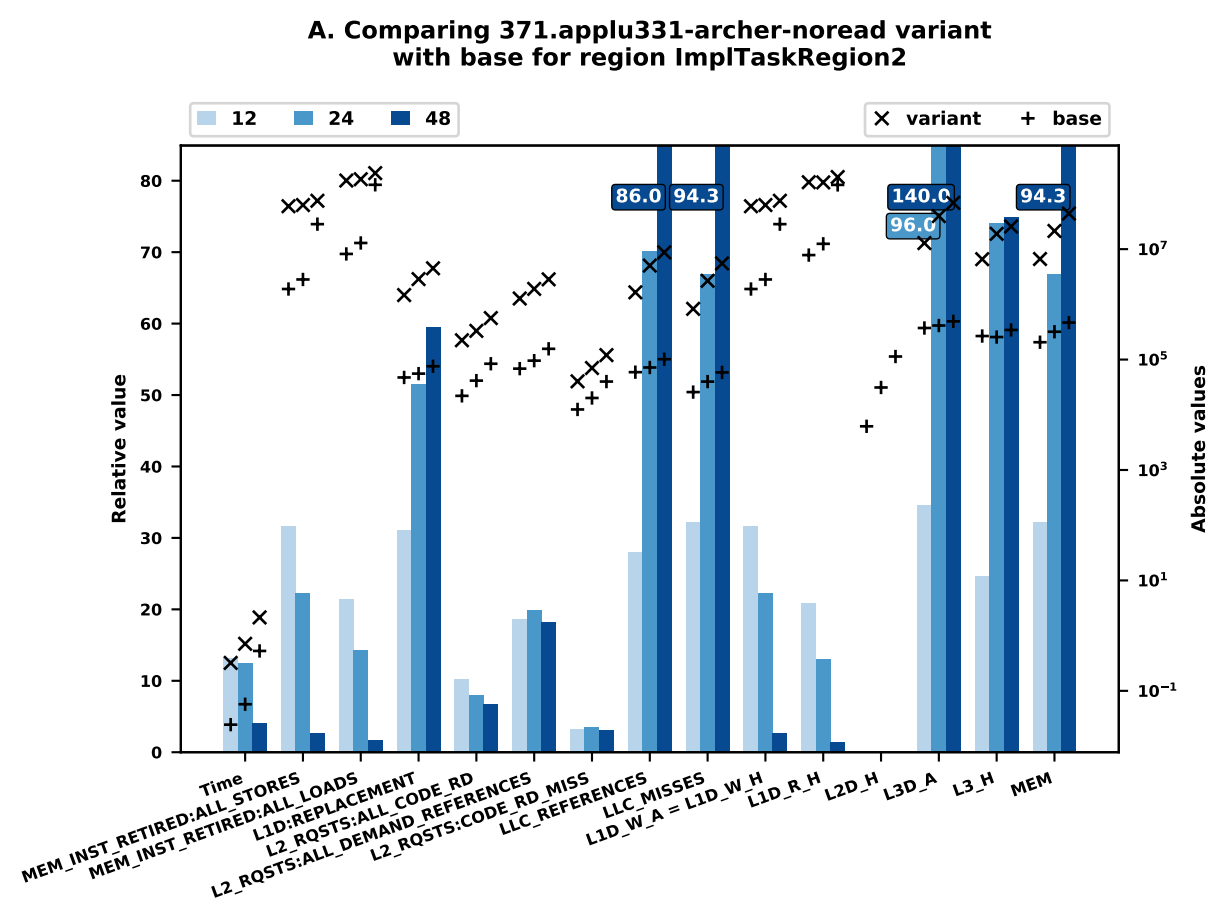

A. Comparing 371.applu331-tsan-sampling variant
with base for region ImplTaskRegion1
12
24
48
variant
base
Relative value
Absolute values
69.6
69.7
1819.4
1350.9
360.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

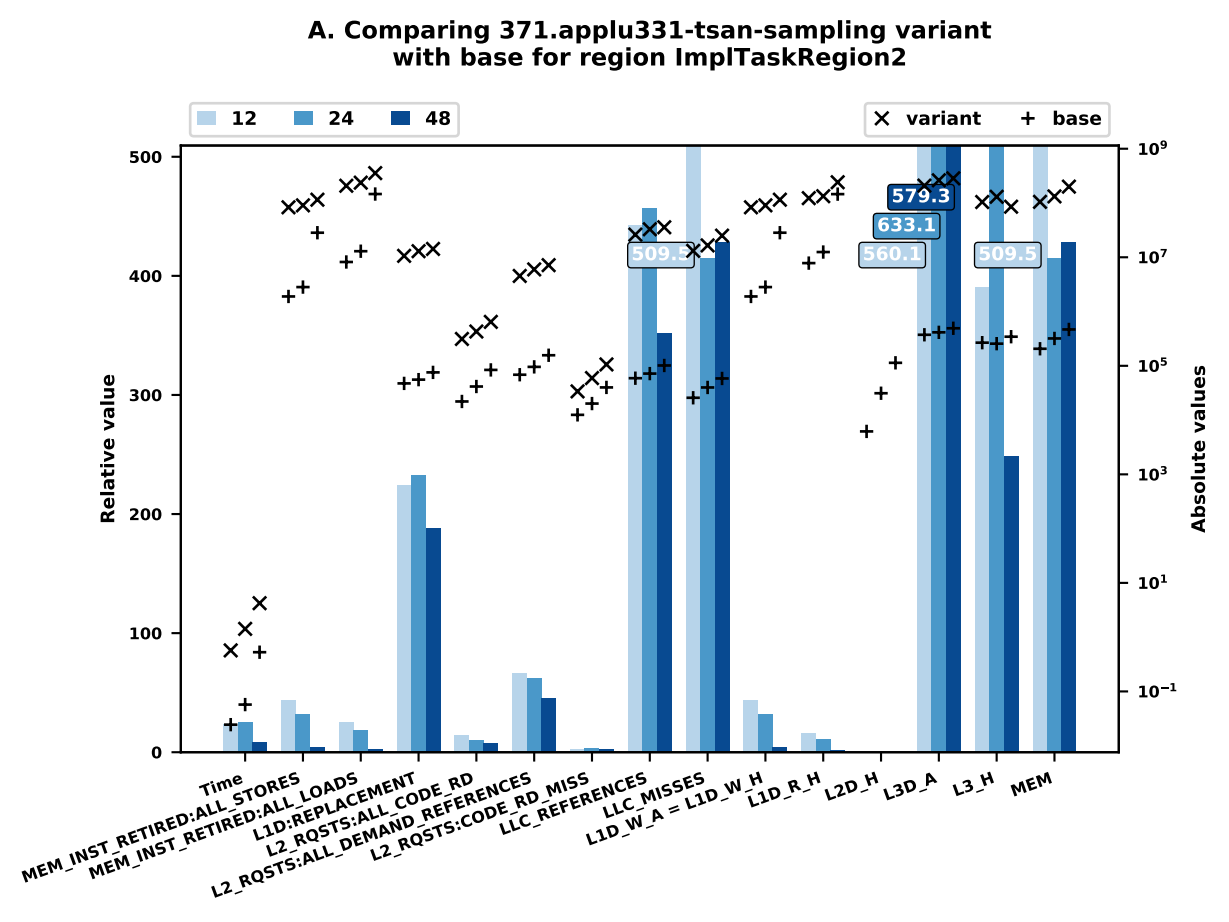

A. Comparing 371.applu331-archer-sampling variant
with base for region ImplTaskRegion1
12
24
48
variant
base
Relative value
Absolute values
70.0
1821.8
1352.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

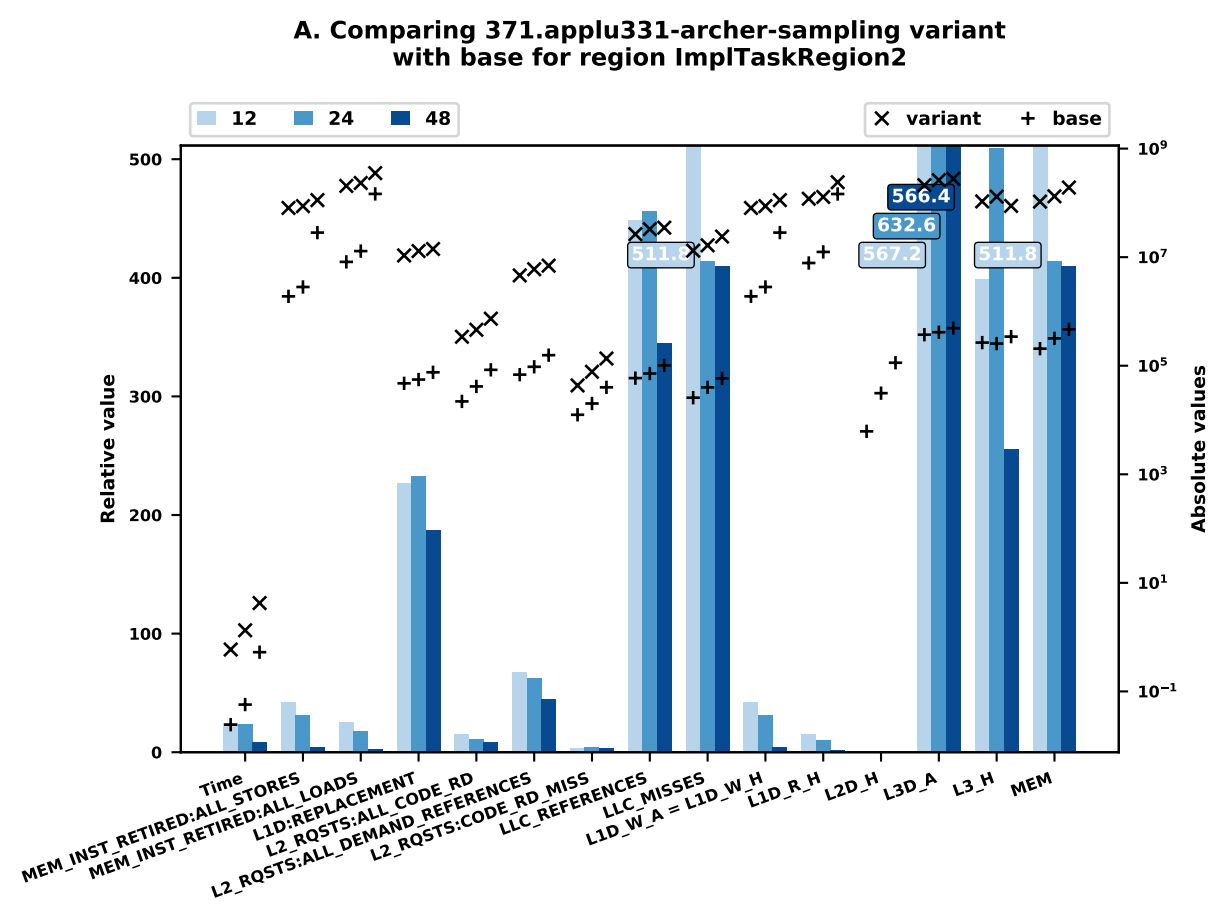

A. Comparing 371.applu331-tsan variant
with base for region ImplTaskRegion1
12
24
48
variant
base
Relative value
Absolute values
69.5
89.6
1817.8
1349.8
959.8
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

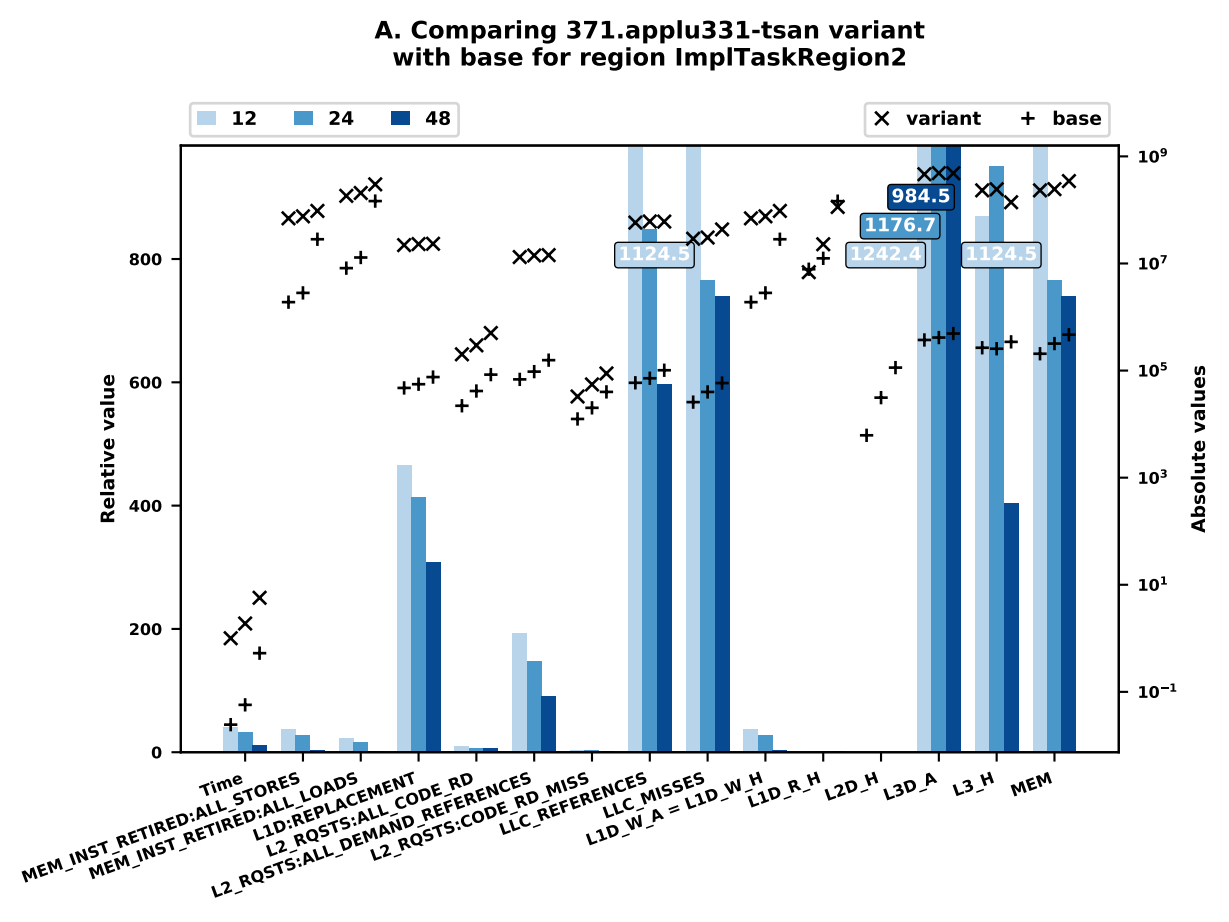

A. Comparing 371.applu331-archer variant
with base for region ImplTaskRegion1
12
24
48
variant
base
Relative value
Absolute values
70.0
1816.2
1347.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

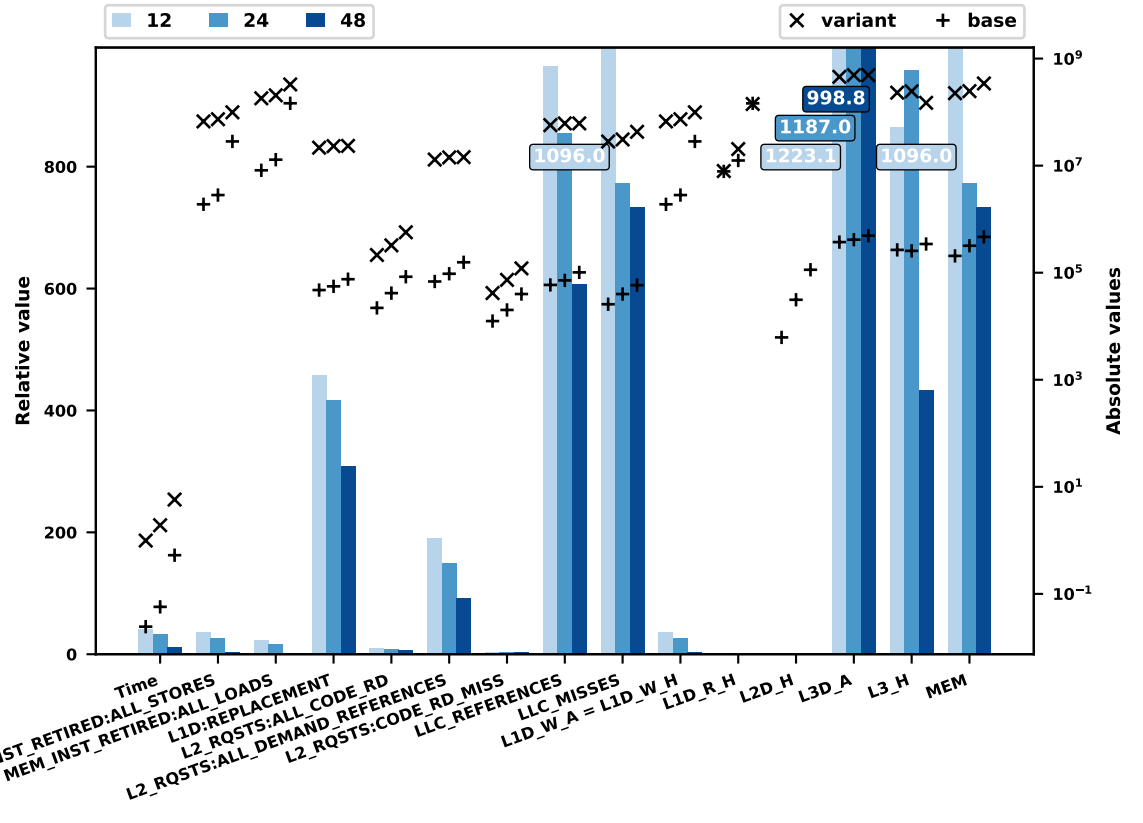

A. Comparing 371.applu331-tsan-noread variant
with base for region ImplTaskRegion2
12
24
48
variant
base
Relative value
Absolute values
87.6
94.0
143.0
78.8
94.0
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

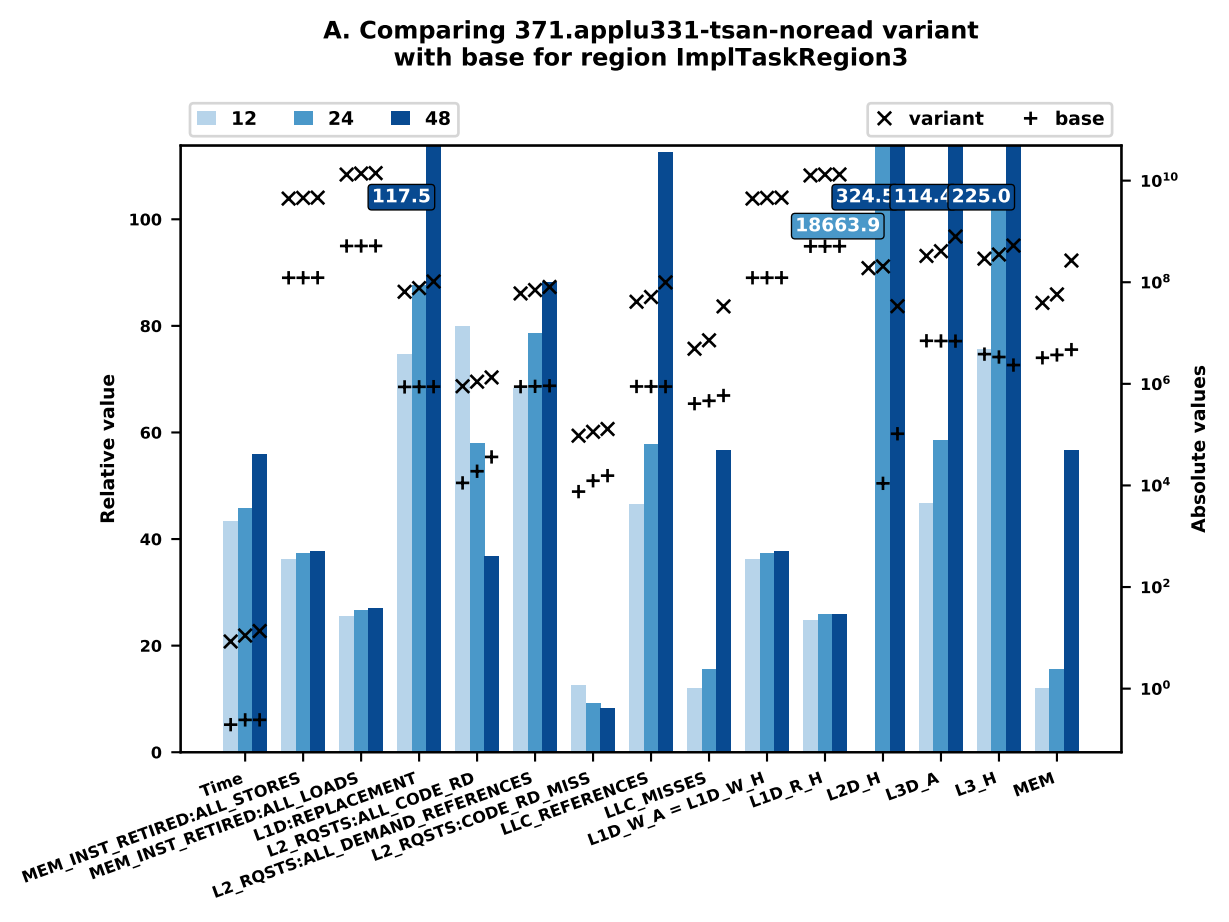

A. Comparing 371.applu331-archer-noread variant
with base for region ImplTaskRegion2
12
24
48
variant
base
Relative value
Absolute values
86.0
94.3
140.0
96.0
94.3
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

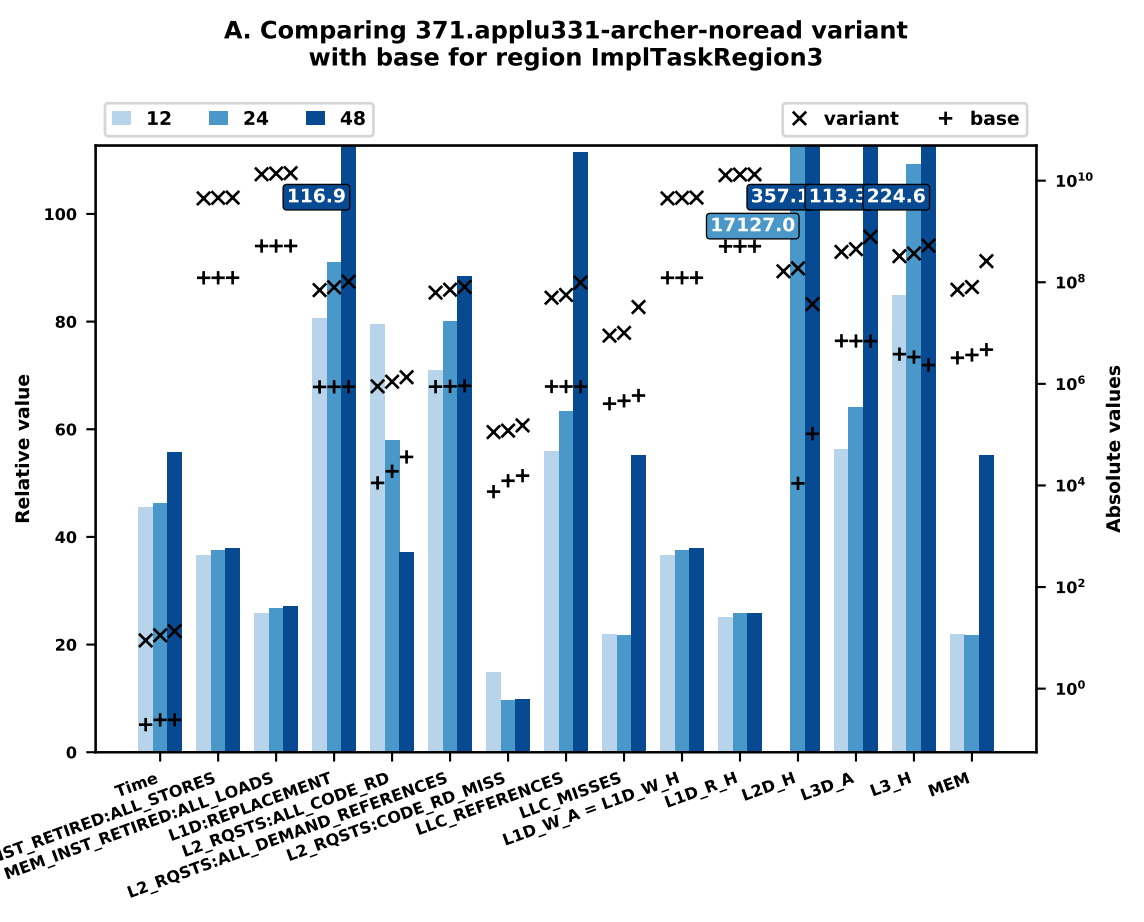

A. Comparing 371.applu331-tsan-sampling variant
with base for region ImplTaskRegion2
12
24
48
variant
base
Relative value
Absolute values
500
400
300
200
100
0
10^{9}
10^{7}
10^{5}
10^{3}
10^{1}
10^{-1}
509.5
579.3
633.1
560.1
509.5
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

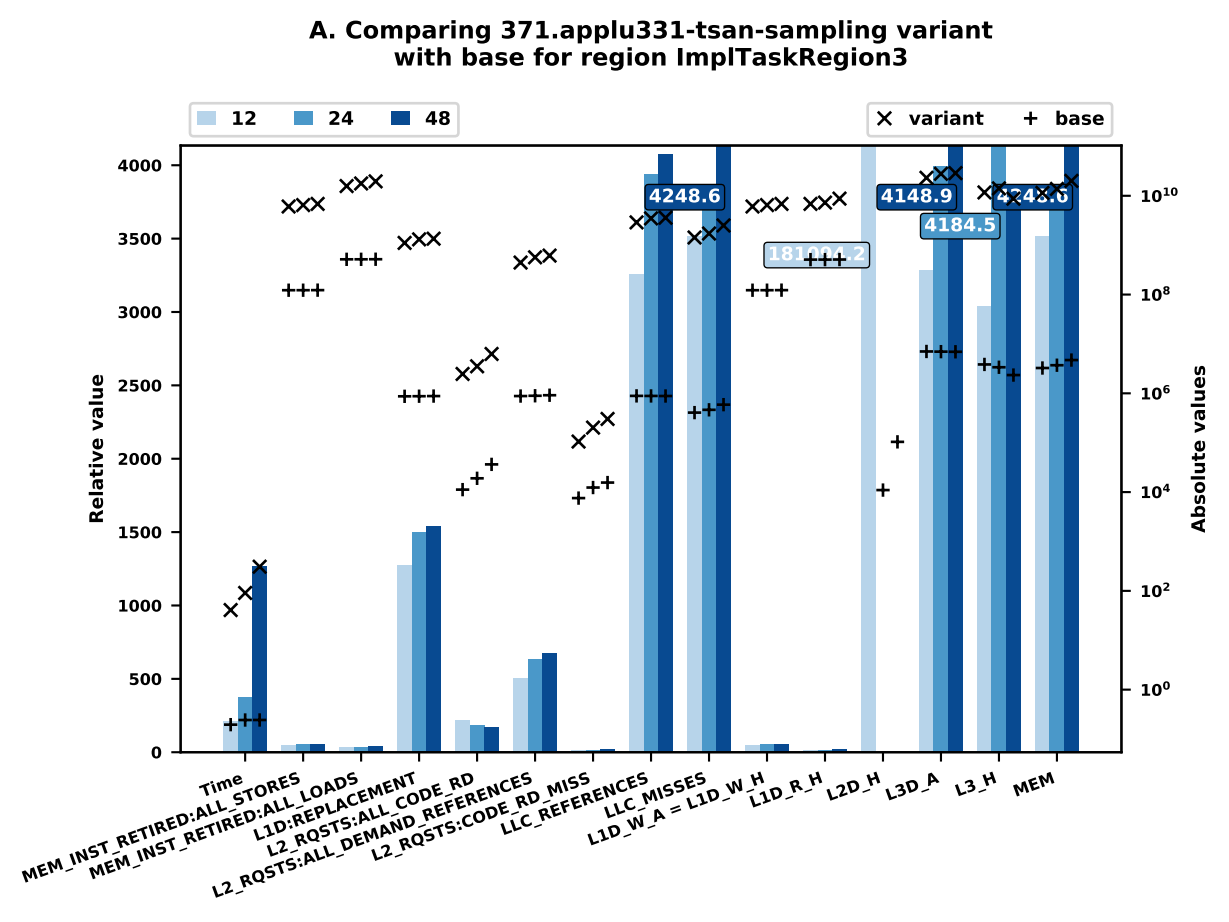

A. Comparing 371.applu331-archer-sampling variant
with base for region ImplTaskRegion2
12
24
48
variant
base
Relative value
Absolute values
500
400
300
200
100
0
10^{9}
10^{7}
10^{5}
10^{3}
10^{1}
10^{-1}
511.8
566.4
632.6
567.2
511.8
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

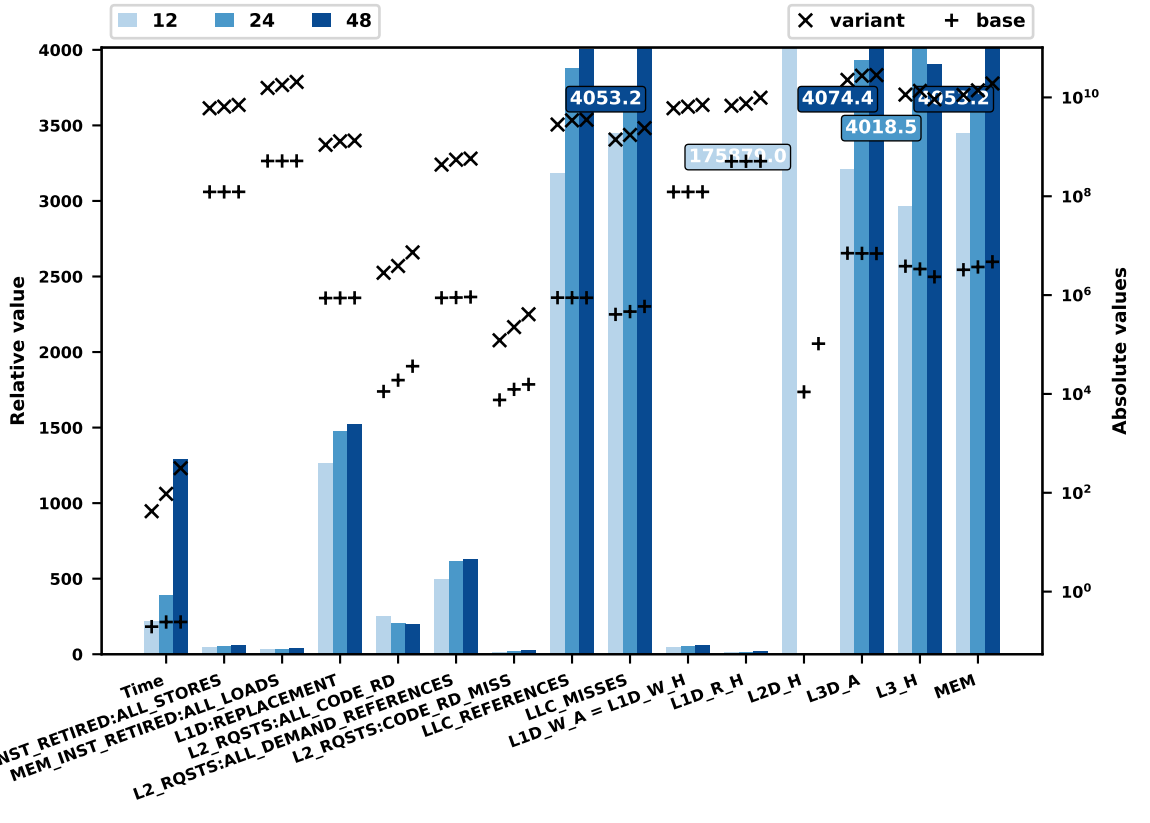

A. Comparing 371.applu331-tsan variant
with base for region ImplTaskRegion2
12
24
48
variant
base
Relative value
Absolute values
0
200
400
600
800
10^{9}
10^{7}
10^{5}
10^{3}
10^{1}
10^{-1}
1124.5
984.5
1176.7
1242.4
1124.5
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

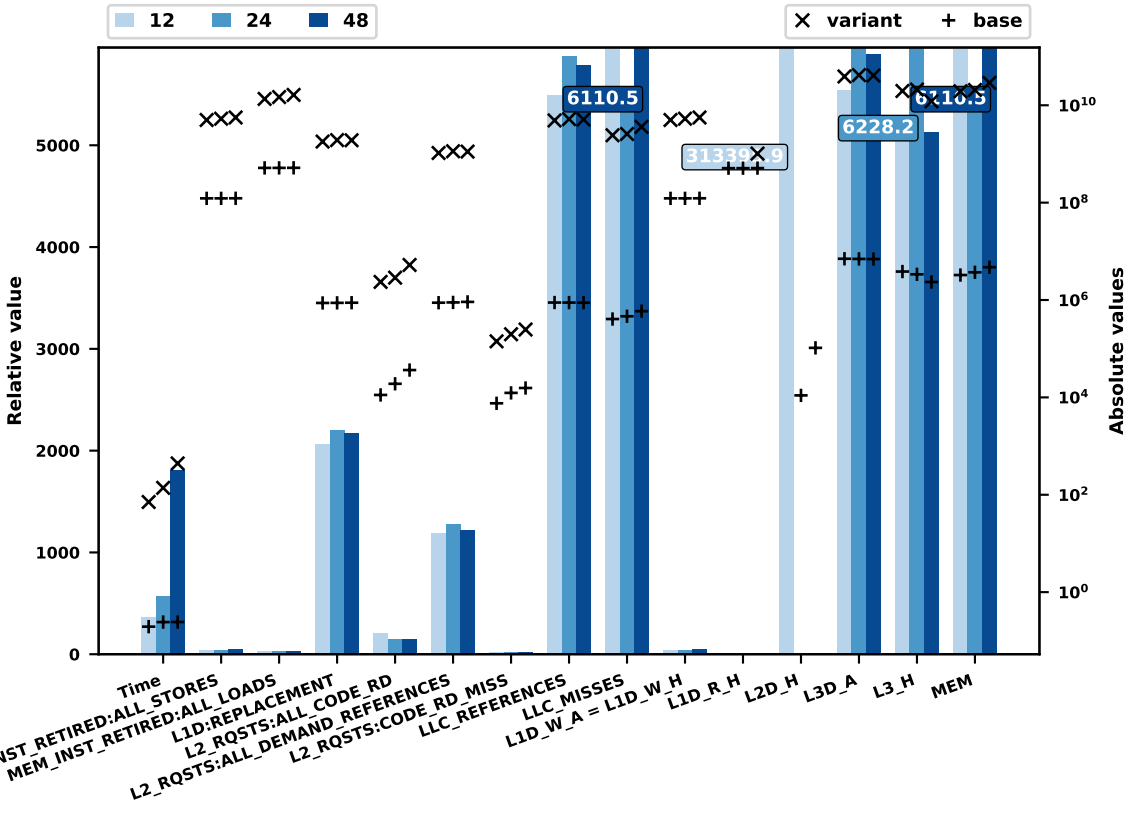

A. Comparing 371.applu331-archer variant
with base for region ImplTaskRegion2
12
24
48
variant
base
Relative value
Absolute values
0
200
400
600
800
10^{9}
10^{7}
10^{5}
10^{3}
10^{1}
10^{-1}
1096.0
998.8
1187.0
1223.1
1096.0
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

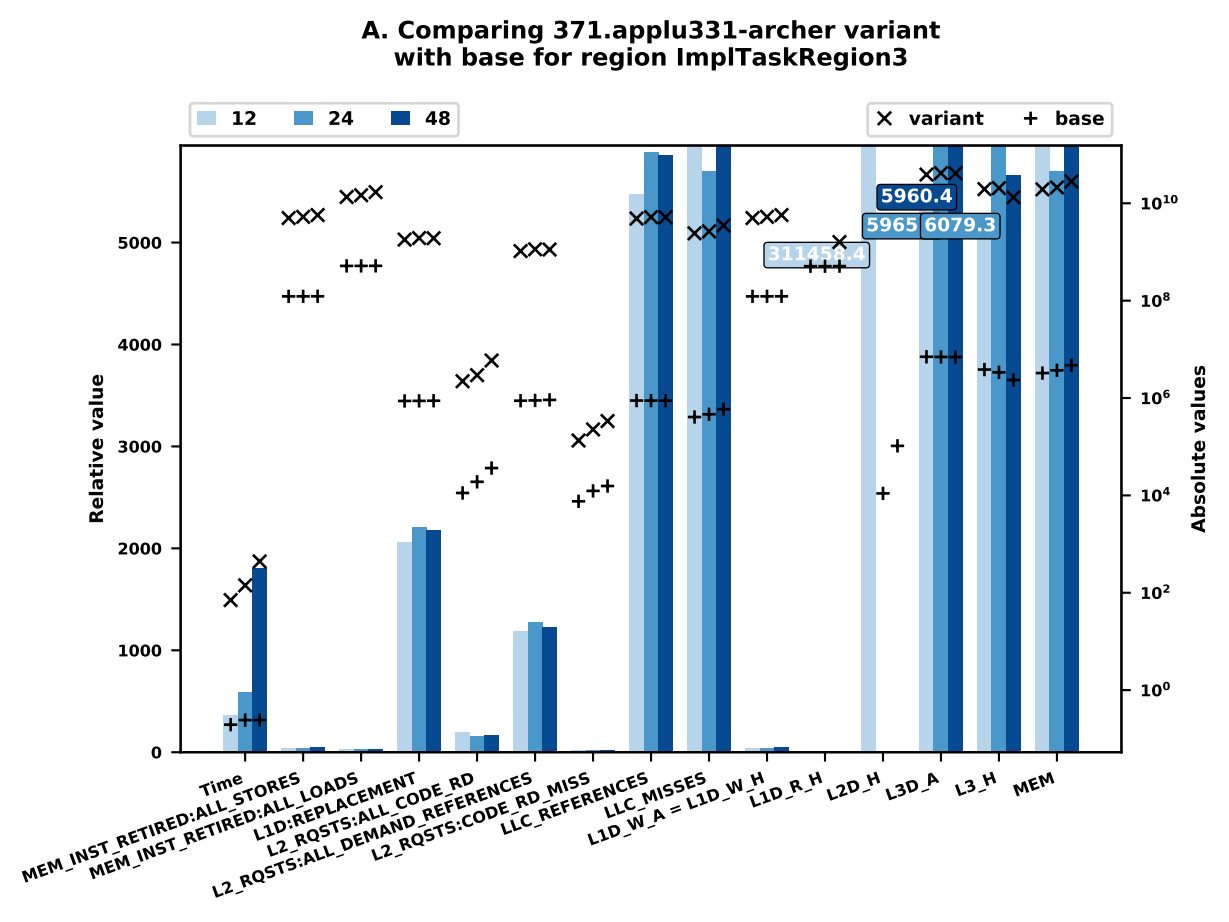

A. Comparing 371.applu331-tsan-noread variant
with base for region ImplTaskRegion3
12
24
48
variant
base
Relative value
Absolute values
117.5
18663.9
324.5
114.4
225.0
0
20
40
60
80
100
10^0
10^2
10^4
10^6
10^8
10^{10}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

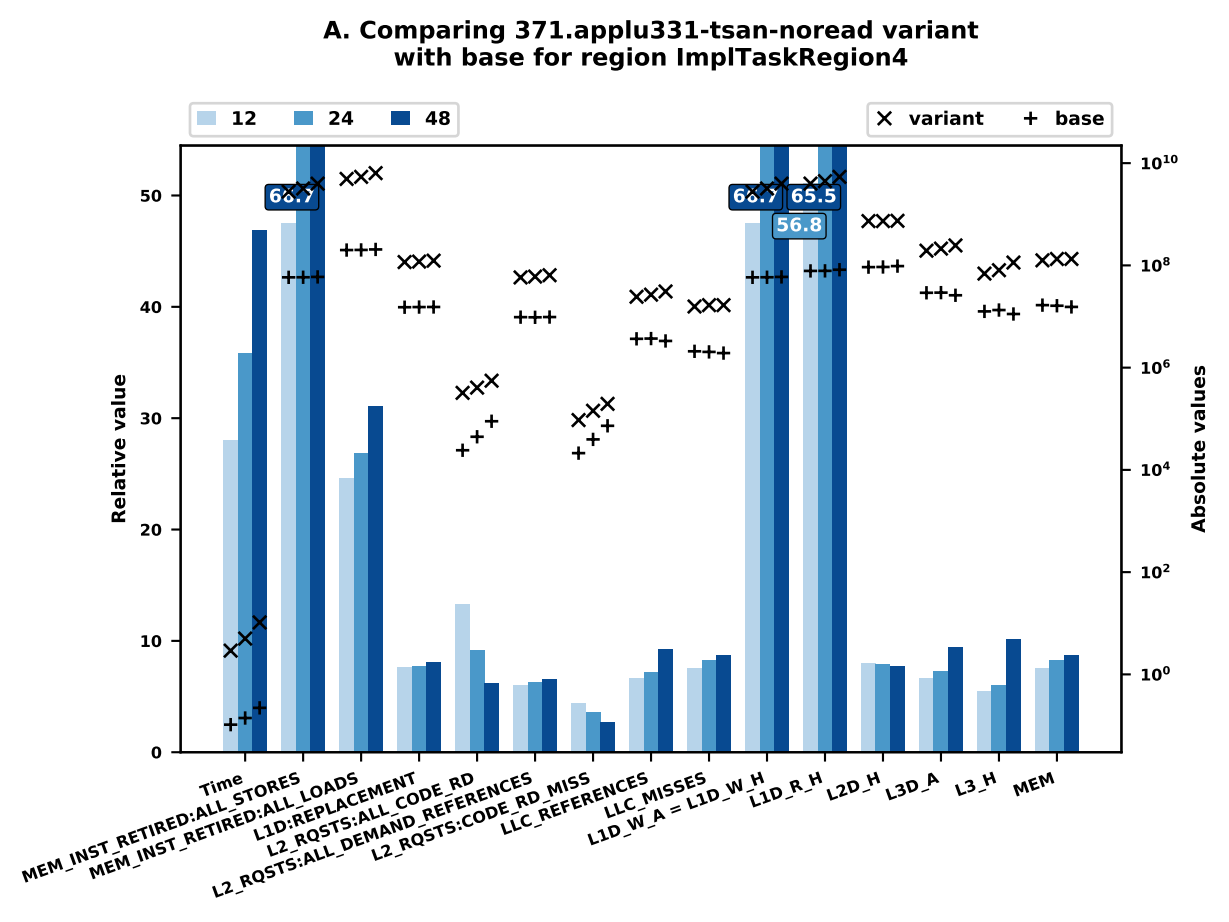

A. Comparing 371.applu331-archer-noread variant
with base for region ImplTaskRegion3
12
24
48
variant
base
116.9
17127.0
Relative value
Absolute values
0
20
40
60
80
100
10^{0}
10^{2}
10^{4}
10^{6}
10^{8}
10^{10}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

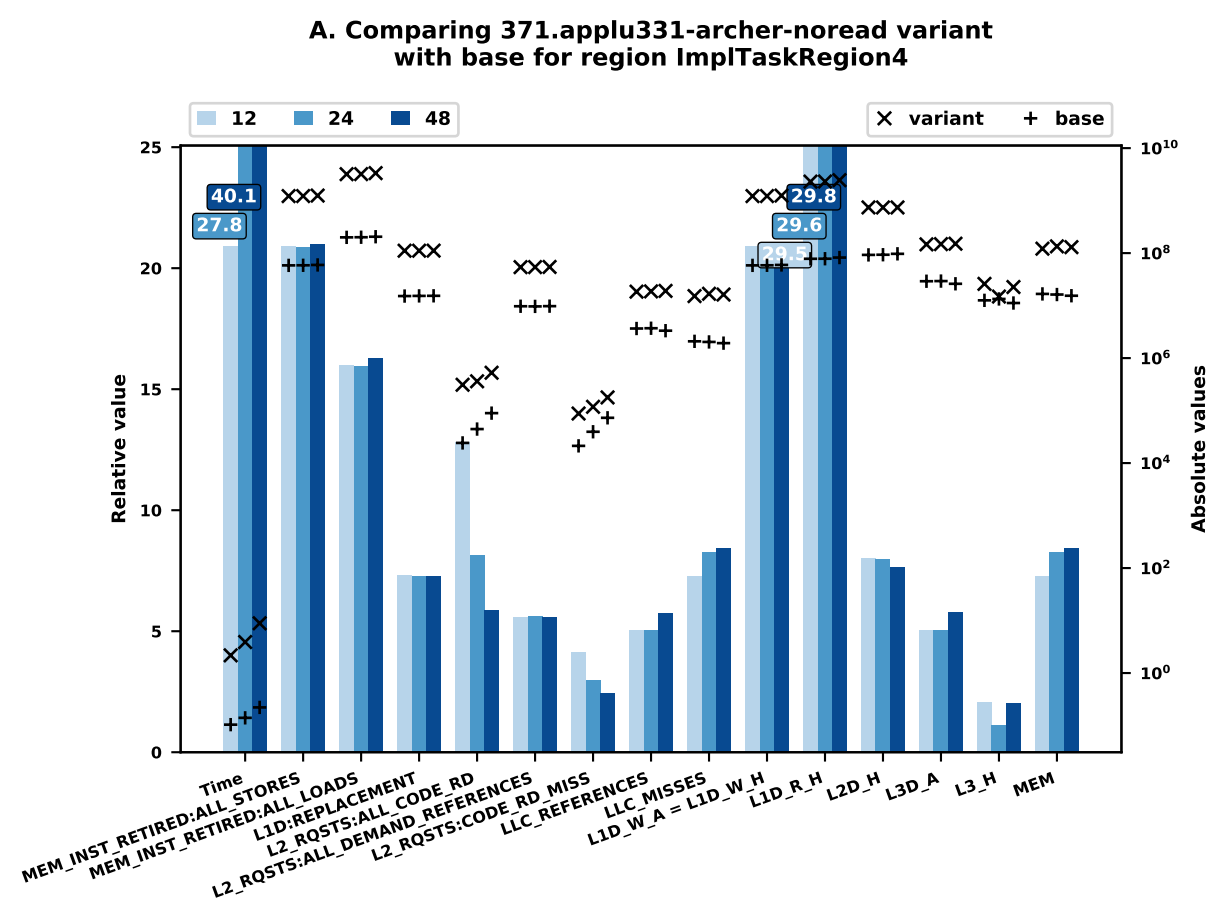

A. Comparing 371.applu331-tsan-sampling variant
with base for region ImplTaskRegion3
12
24
48
variant
base
Relative value
Absolute values
4248.6
4148.9
4184.5
4248.6
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

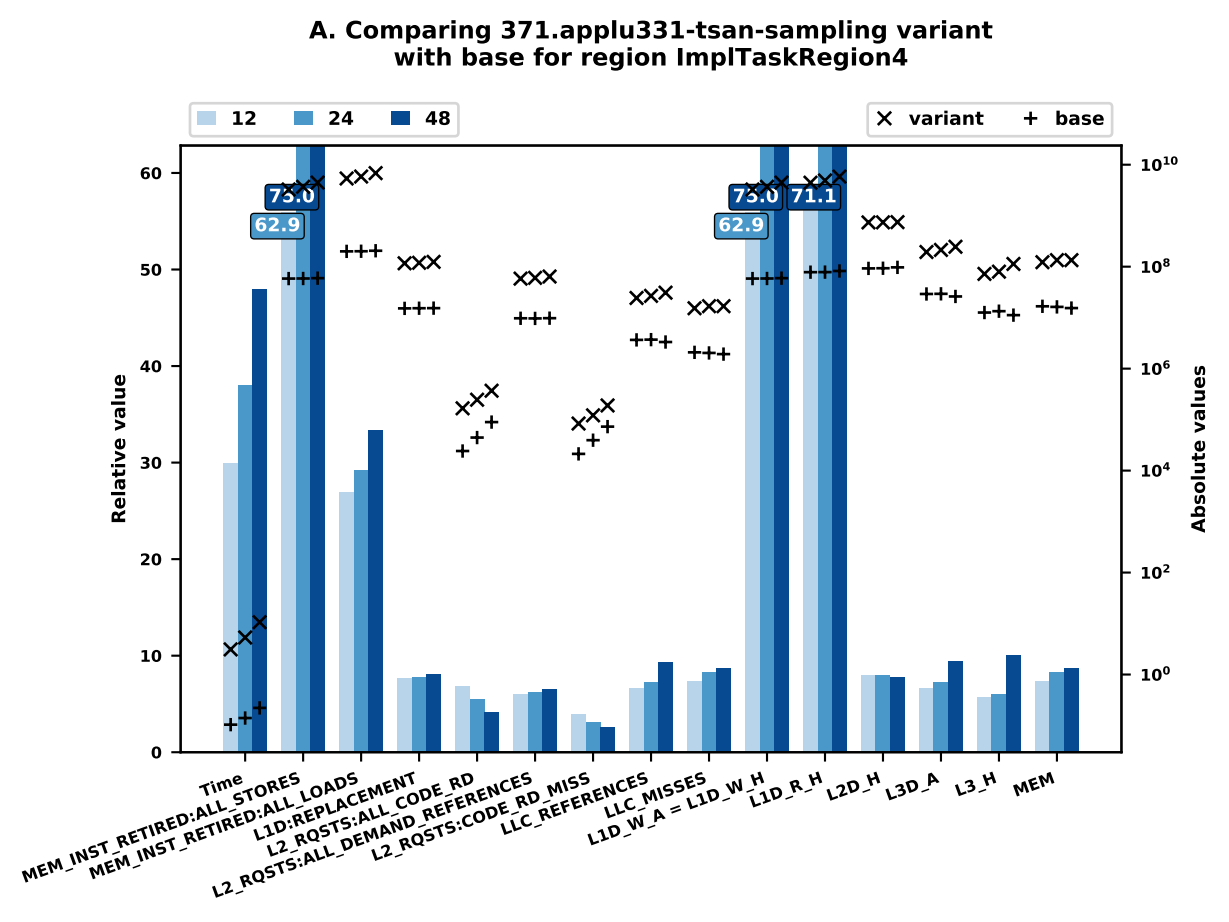

A. Comparing 371.applu331-archer-sampling variant
with base for region ImplTaskRegion3
12
24
48
variant
base
Relative value
Absolute values
4053.2
4074.4
4018.5
4053.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

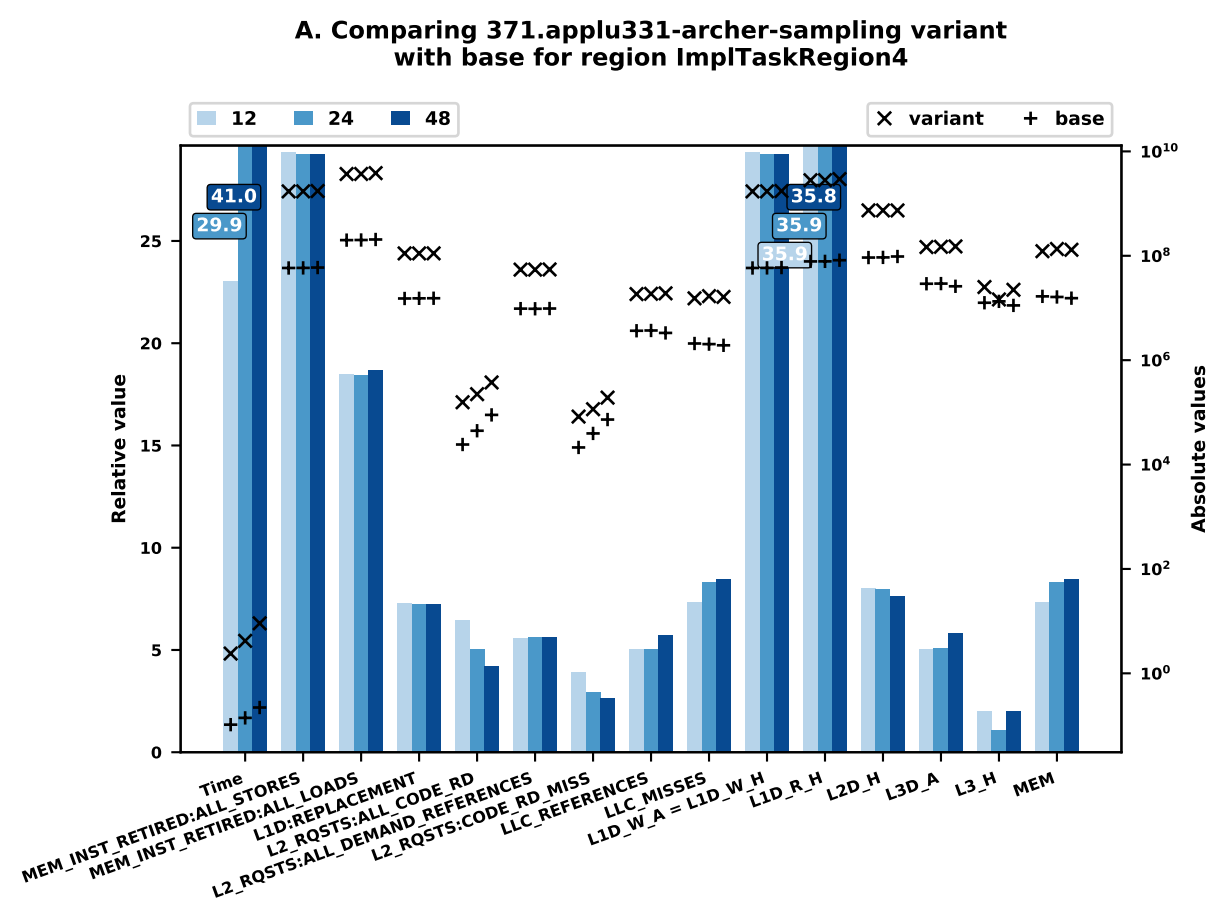

A. Comparing 371.applu331-tsan variant
with base for region ImplTaskRegion3
12
24
48
variant
base
Relative value
Absolute values
0
1000
2000
3000
4000
5000
10^0
10^2
10^4
10^6
10^8
10^{10}
6110.5
6228.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

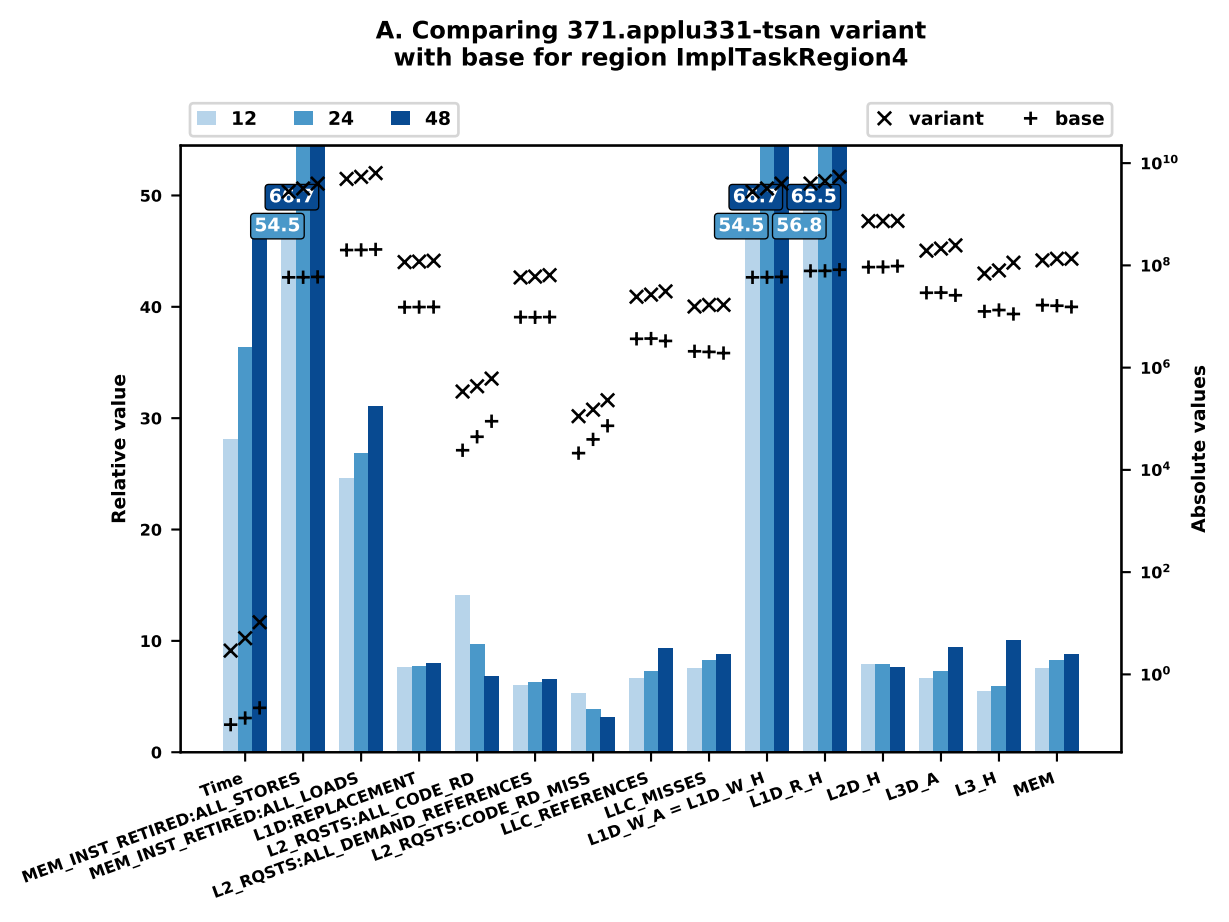

A. Comparing 371.applu331-archer variant
with base for region ImplTaskRegion3
12
24
48
variant
base
Relative value
Absolute values
0
1000
2000
3000
4000
5000
10^0
10^2
10^4
10^6
10^8
10^{10}
5960.4
5965
6079.3
311456.4
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

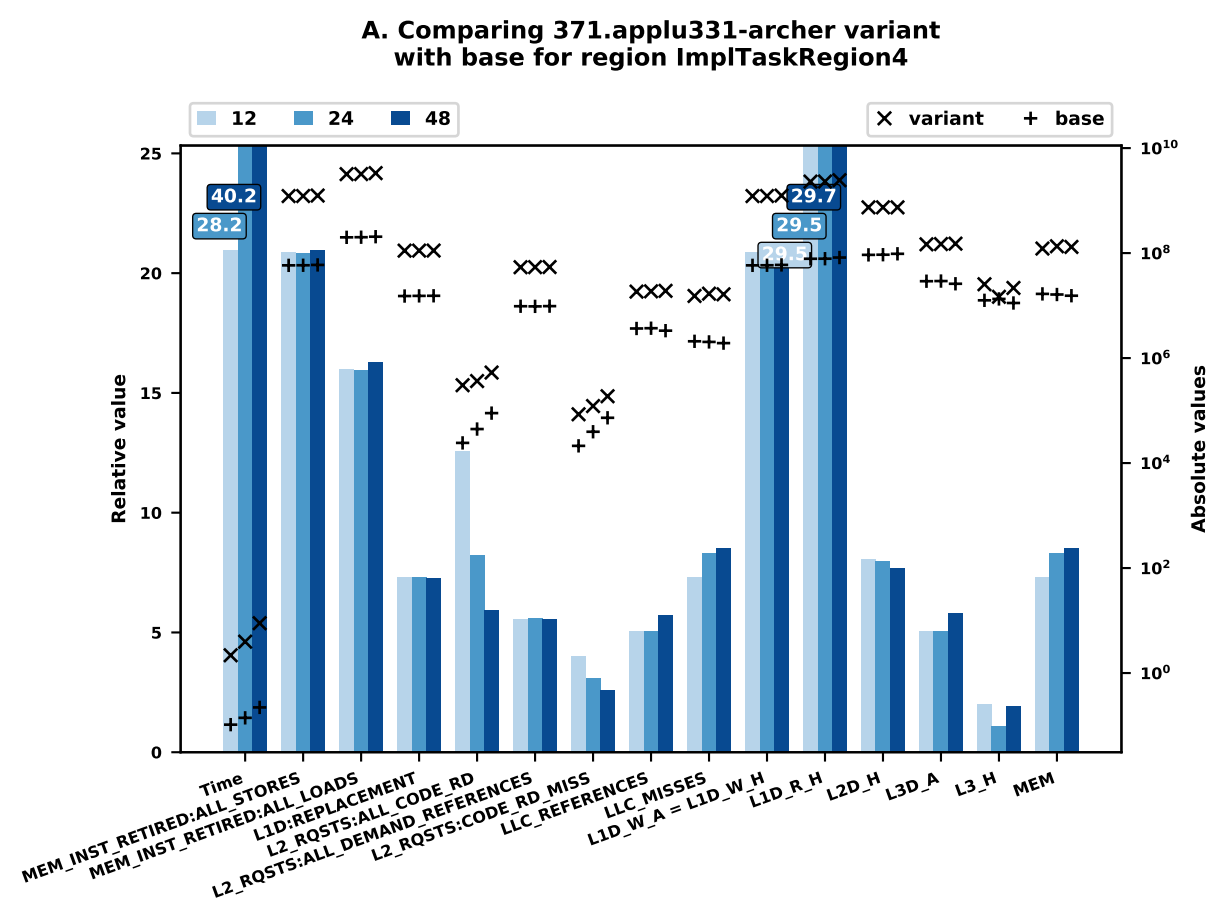

A. Comparing 371.applu331-tsan-noread variant
with base for region ImplTaskRegion4
12
24
48
variant
base
Relative value
Absolute values
68.7
68.7
65.5
56.8
0
10
20
30
40
50
10^{0}
10^{2}
10^{4}
10^{6}
10^{8}
10^{10}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

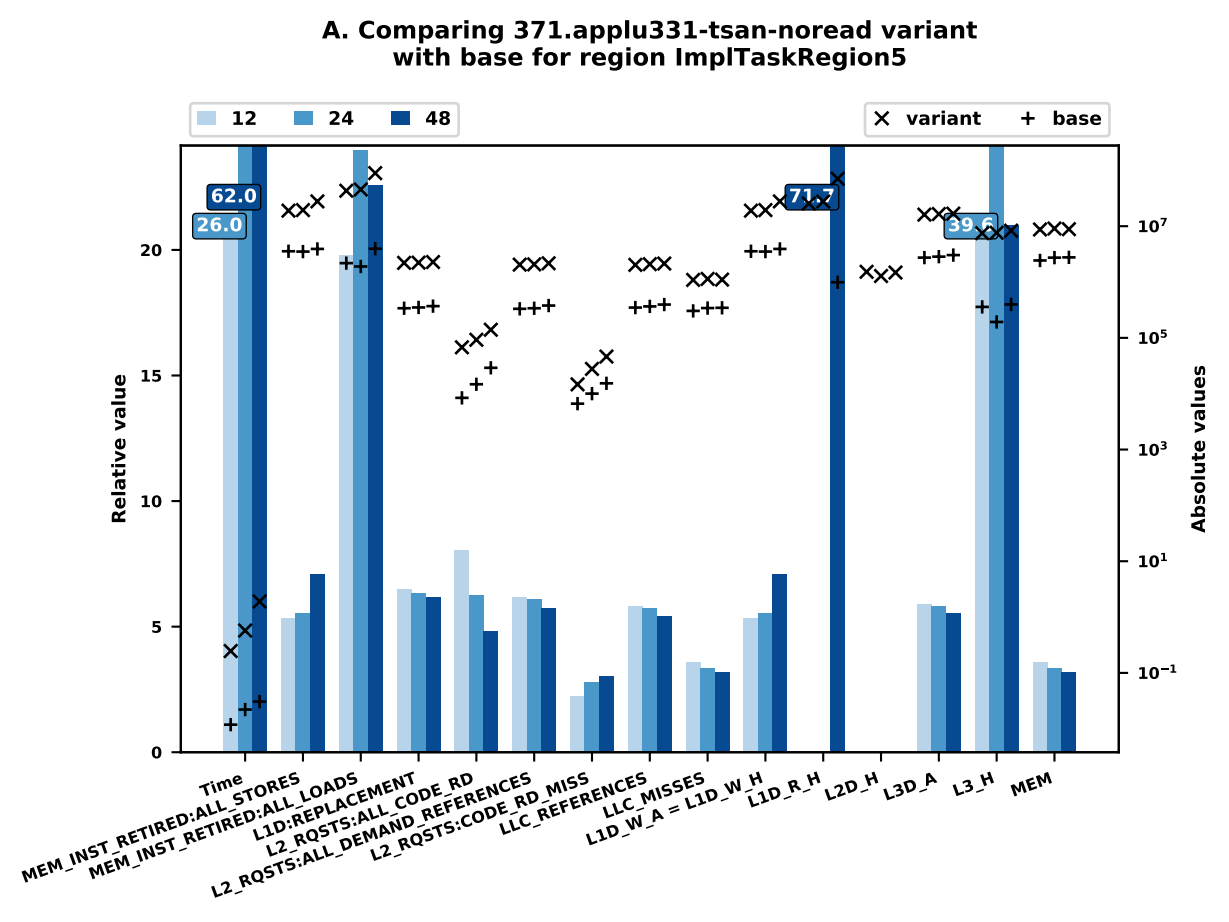

A. Comparing 371.applu331-archer-noread variant
with base for region ImplTaskRegion4
12
24
48
variant
base
Relative value
Absolute values
40.1
27.8
29.8
29.6
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

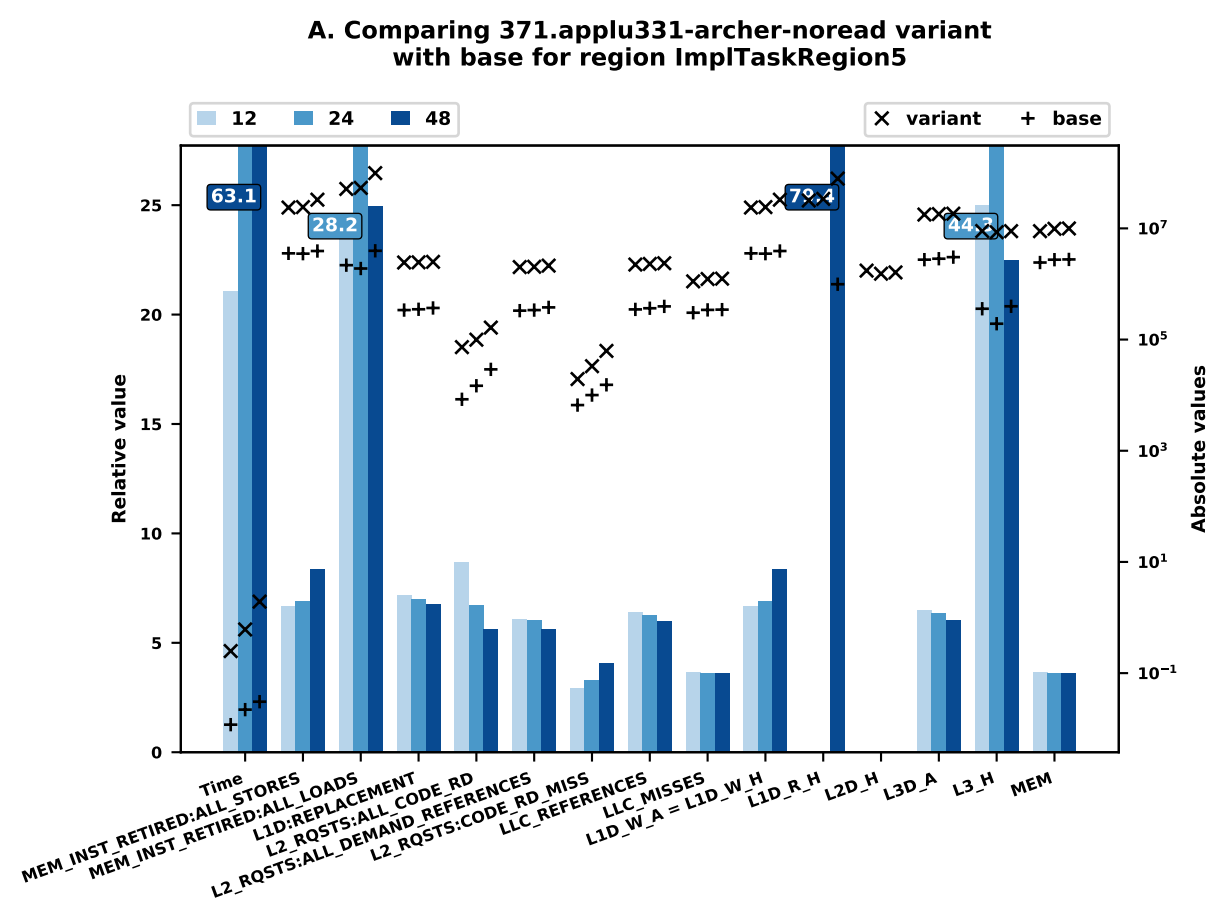

A. Comparing 371.applu331-tsan-sampling variant
with base for region ImplTaskRegion4
12
24
48
variant
base
Relative value
Absolute values
73.0
62.9
73.0
71.1
62.9
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

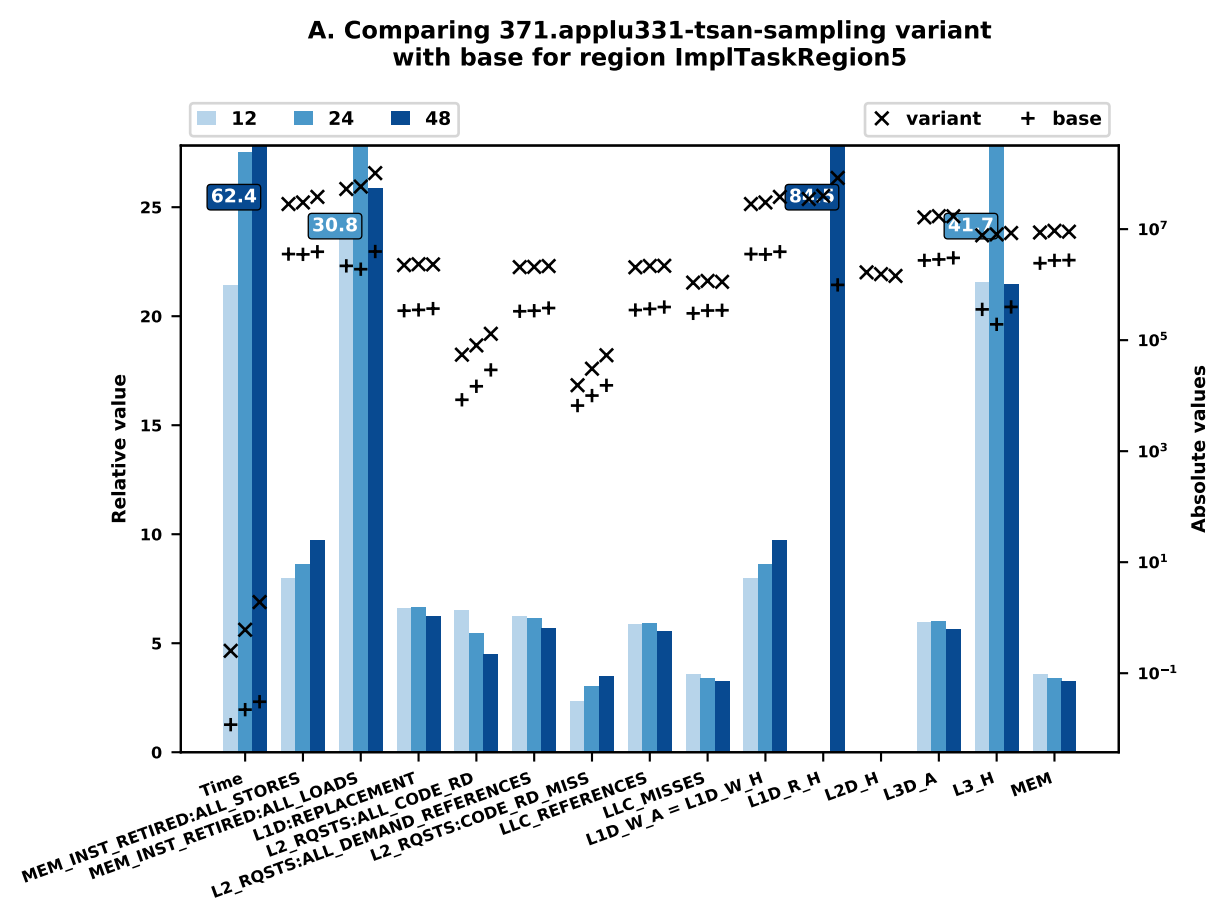

A. Comparing 371.applu331-archer-sampling variant
with base for region ImplTaskRegion4
12
24
48
variant
base
41.0
29.9
35.8
35.9
35.8
Relative value
Absolute values
0
5
10
15
20
25
10^{0}
10^{2}
10^{4}
10^{6}
10^{8}
10^{10}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

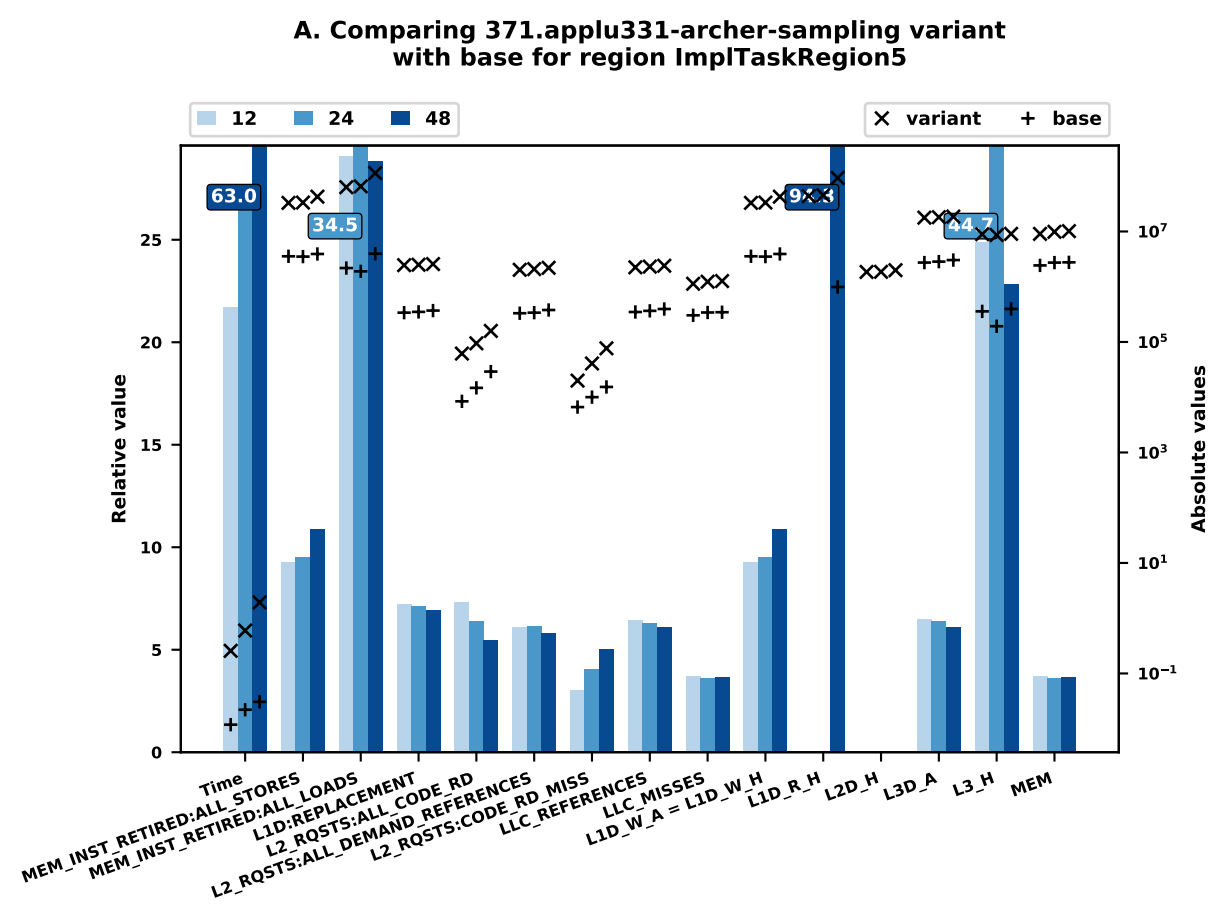

A. Comparing 371.applu331-tsan variant
with base for region ImplTaskRegion4
12
24
48
variant
base
Relative value
Absolute values
0
10
20
30
40
50
10^0
10^2
10^4
10^6
10^8
10^{10}
54.5
68.7
54.5
68.7
56.8
65.5
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

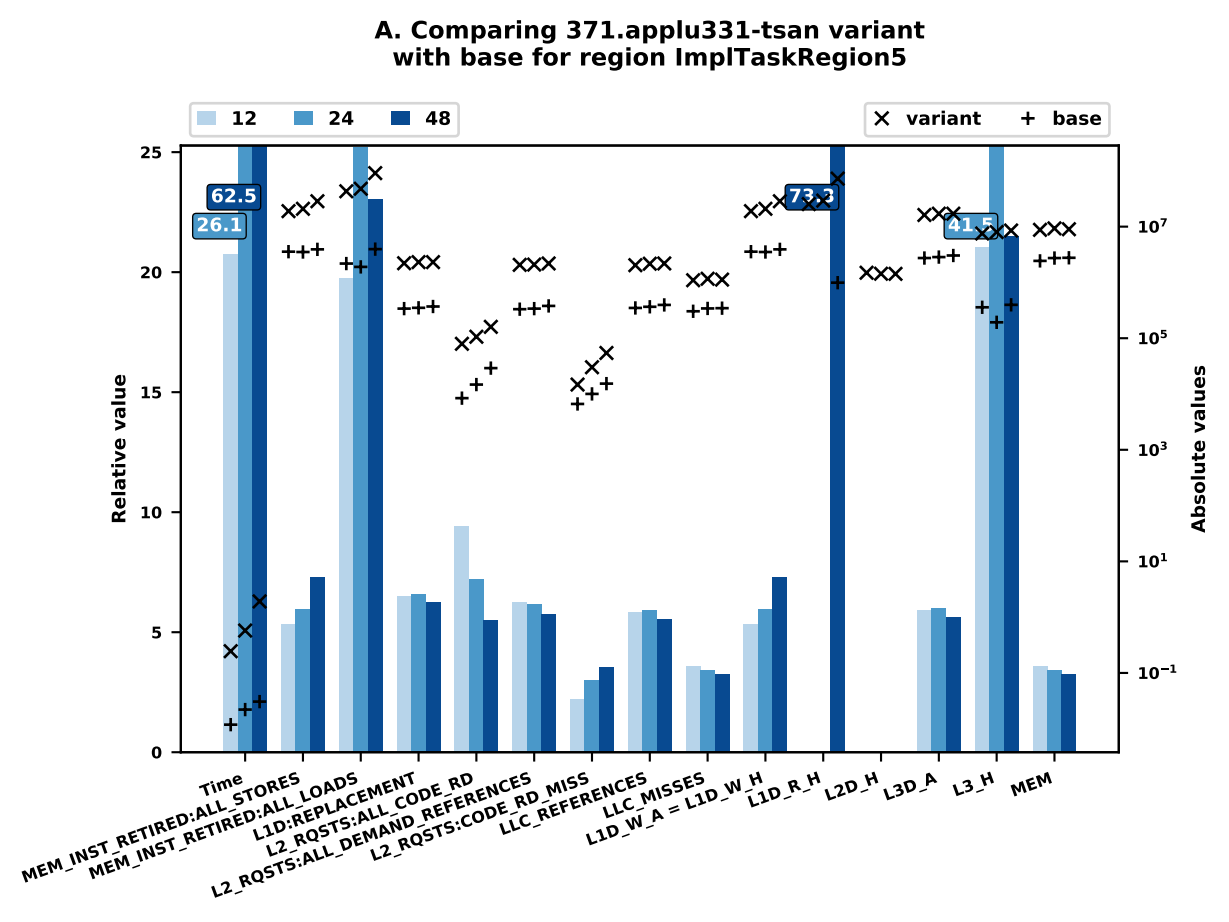

A. Comparing 371.applu331-archer variant
with base for region ImplTaskRegion4
12
24
48
variant
base
40.2
28.2
29.7
29.5
Relative value
Absolute values
0
5
10
15
20
25
10^{0}
10^{2}
10^{4}
10^{6}
10^{8}
10^{10}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

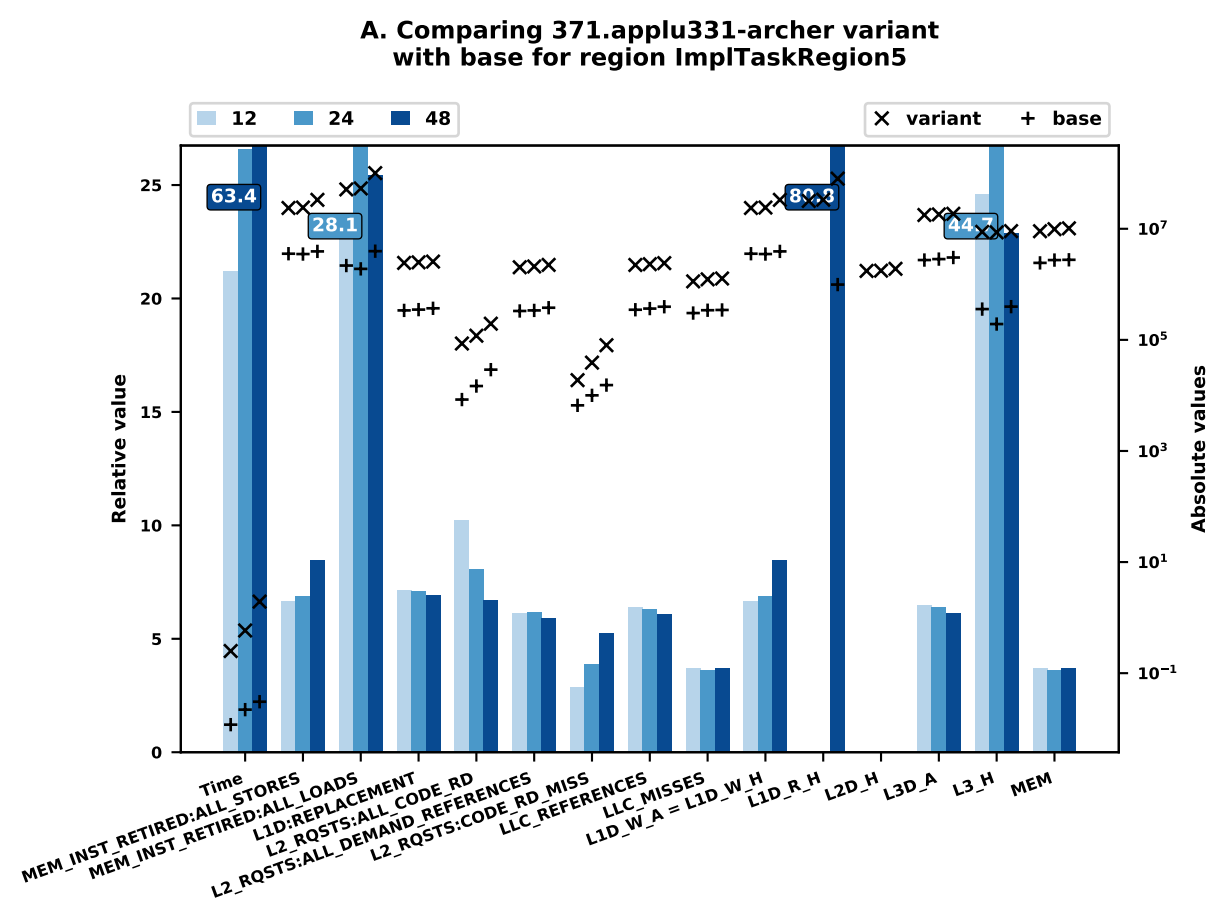

A. Comparing 371.applu331-tsan-noread variant
with base for region ImplTaskRegion5
12
24
48
variant
base
62.0
26.0
71.7
39.6
Relative value
Absolute values
0
5
10
15
20
10^{7}
10^{5}
10^{3}
10^{1}
10^{-1}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

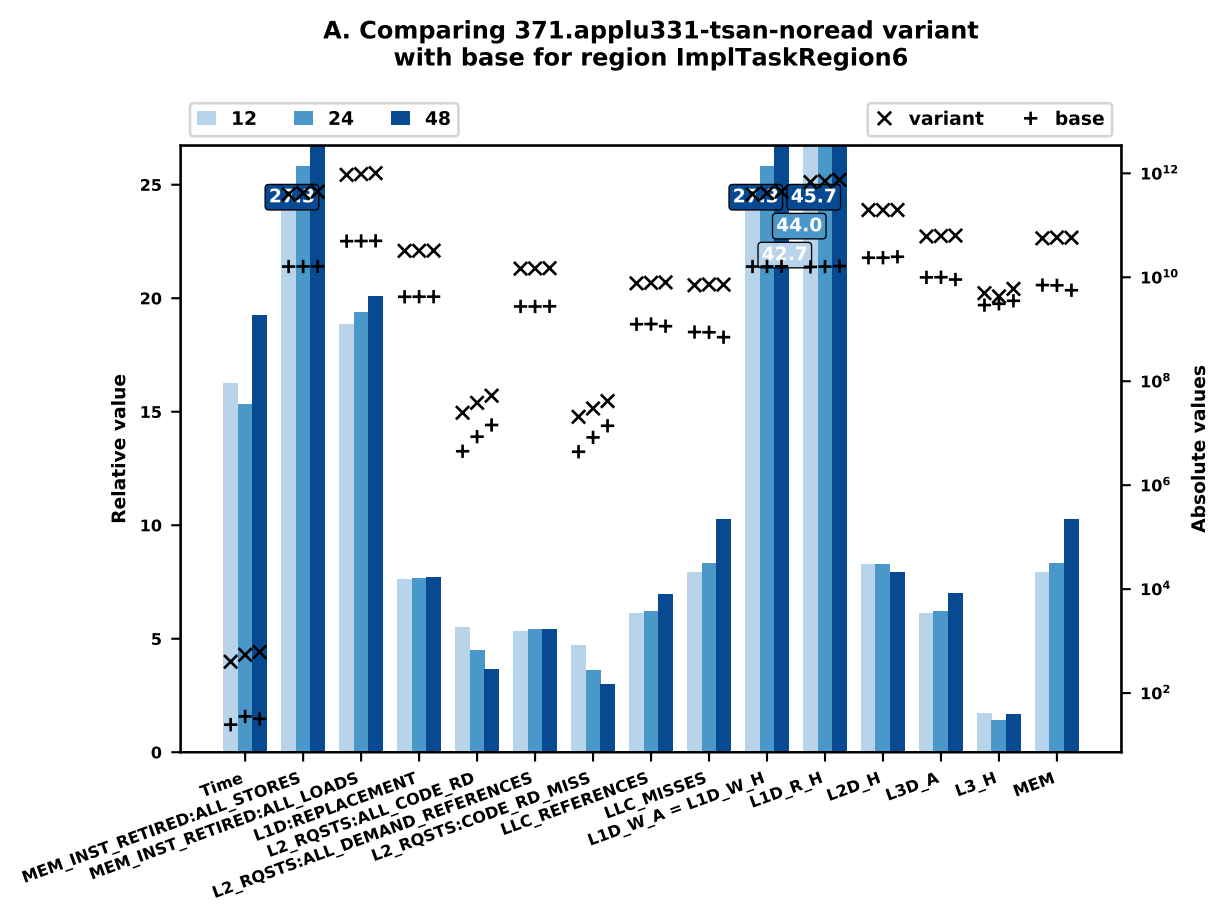

A. Comparing 371.applu331-archer-noread variant
with base for region ImplTaskRegion5
12
24
48
variant
base
63.1
28.2
79.4
44.3
Relative value
Absolute values
0
5
10
15
20
25
10^{7}
10^{5}
10^{3}
10^{1}
10^{-1}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

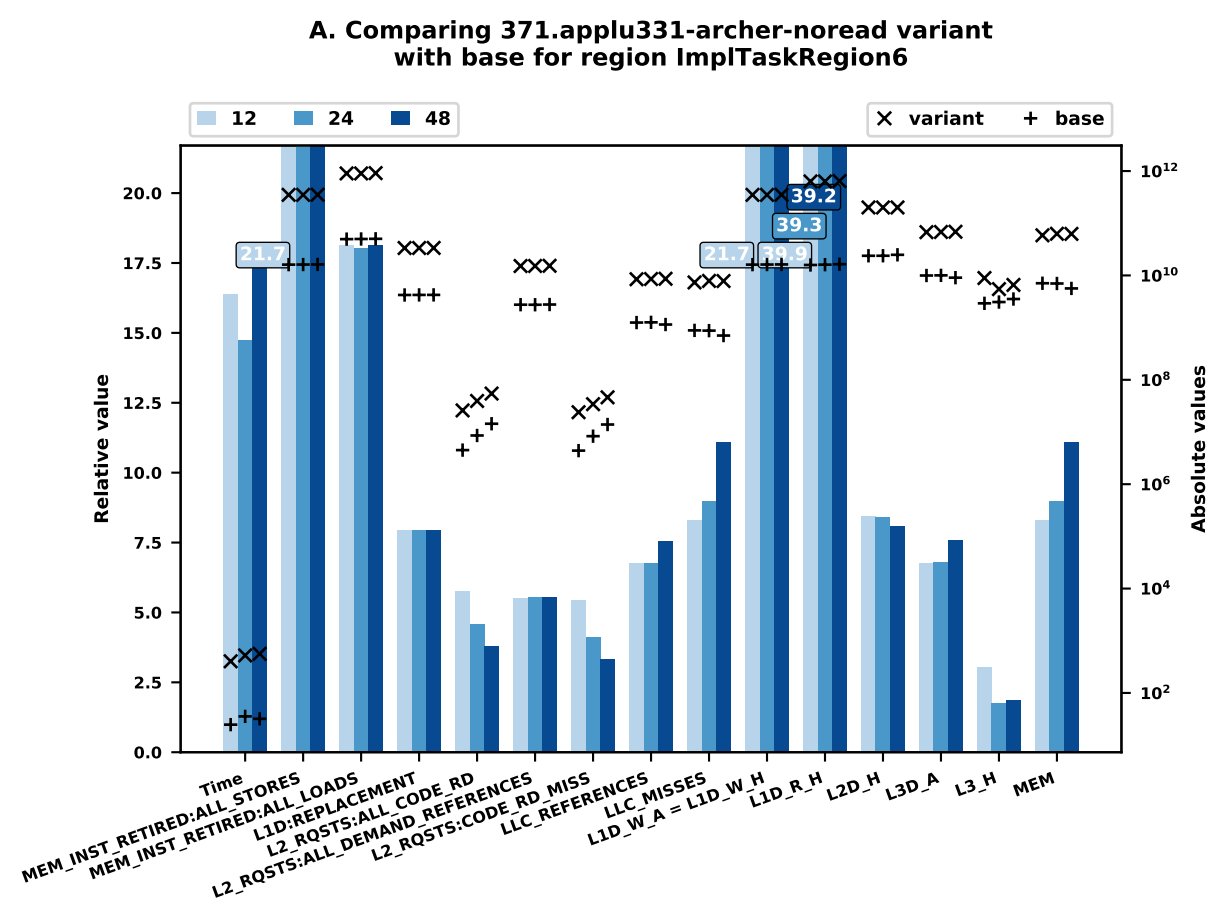

A. Comparing 371.applu331-tsan-sampling variant
with base for region ImplTaskRegion5
12
24
48
variant
base
62.4
30.8
41.7
Relative value
Absolute values
0
5
10
15
20
25
10^{7}
10^{5}
10^{3}
10^{1}
10^{-1}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

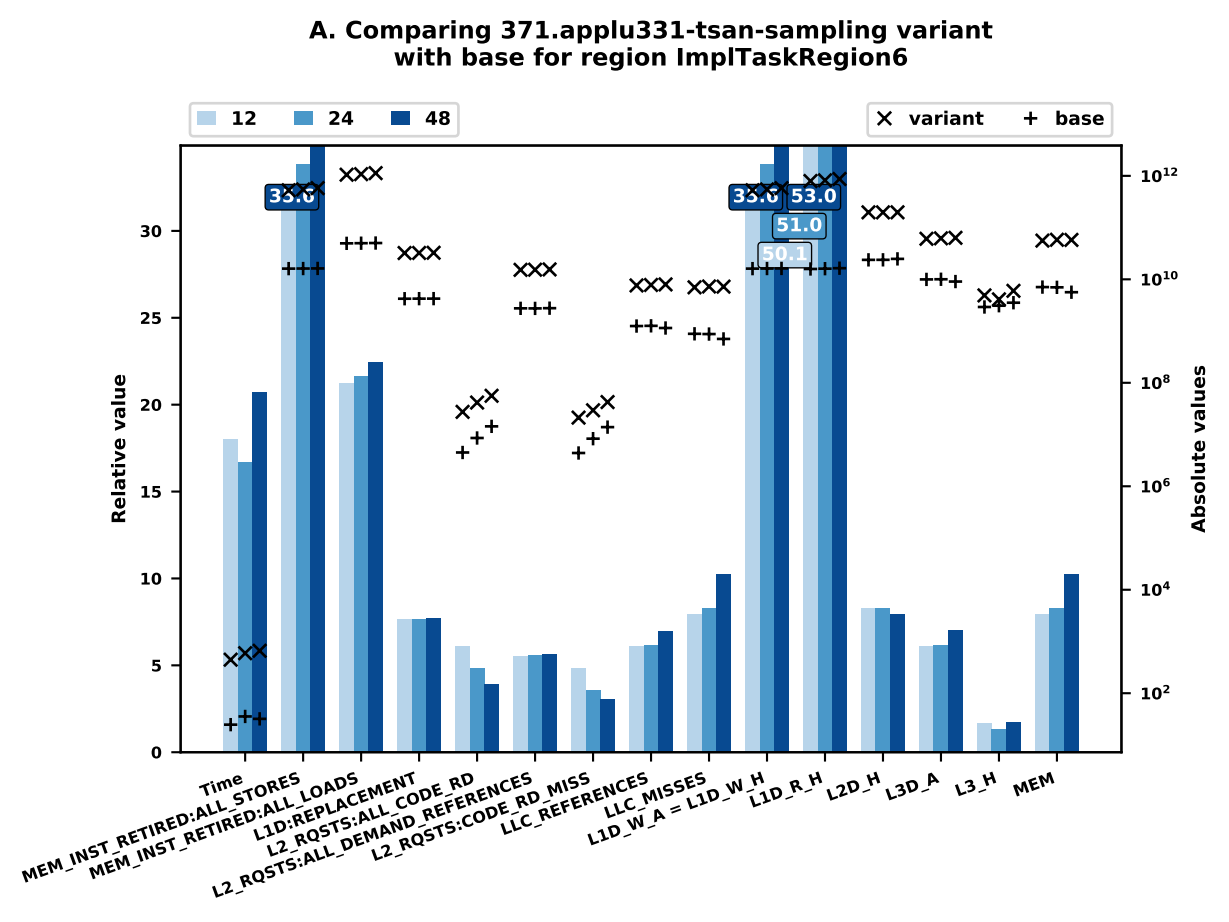

A. Comparing 371.applu331-archer-sampling variant
with base for region ImplTaskRegion5
12
24
48
variant
base
63.0
34.5
9.3
44.7
Relative value
Absolute values
0
5
10
15
20
25
10^{7}
10^{5}
10^{3}
10^{1}
10^{-1}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

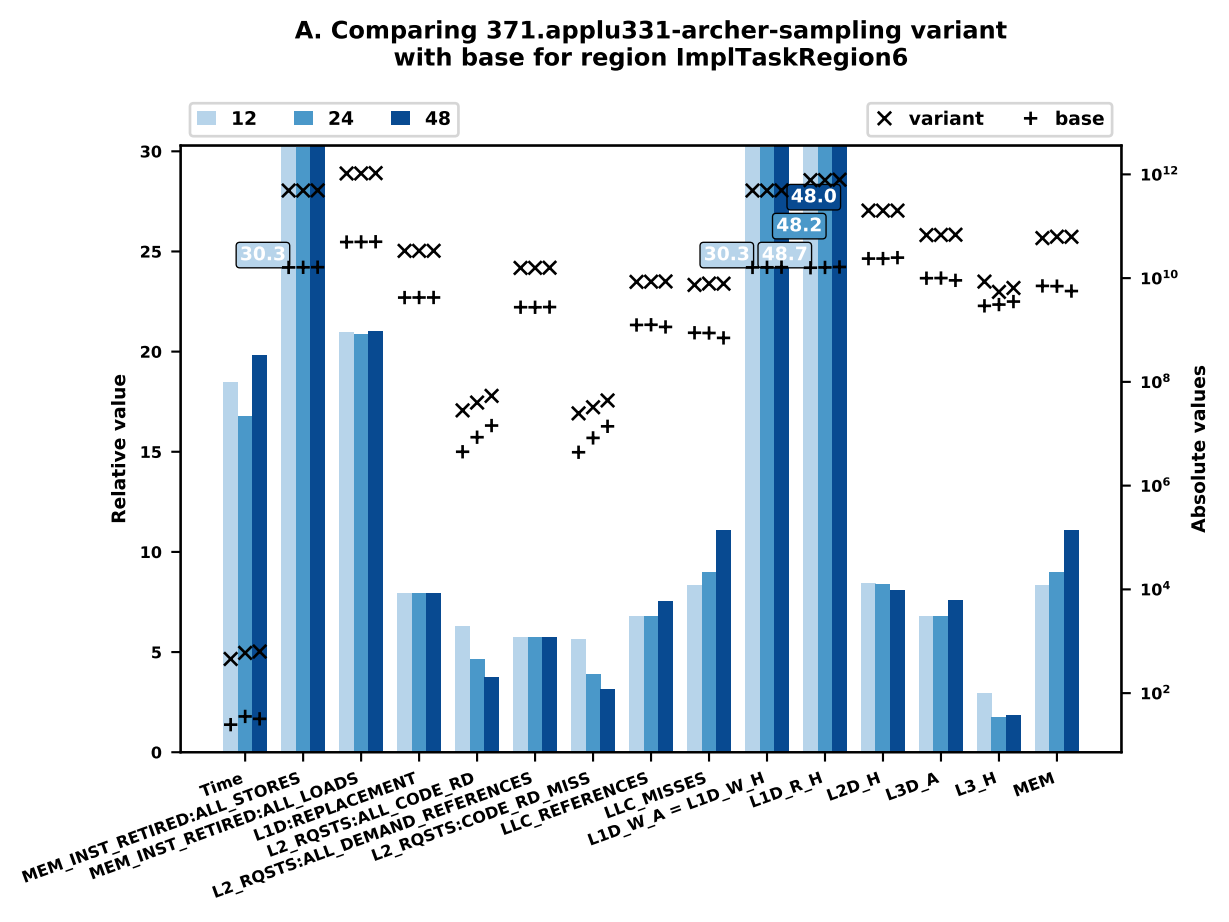

A. Comparing 371.applu331-tsan variant
with base for region ImplTaskRegion5
12
24
48
variant
base
62.5
26.1
73.3
41.5
Relative value
Absolute values
0
5
10
15
20
25
10^{7}
10^{5}
10^{3}
10^{1}
10^{-1}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

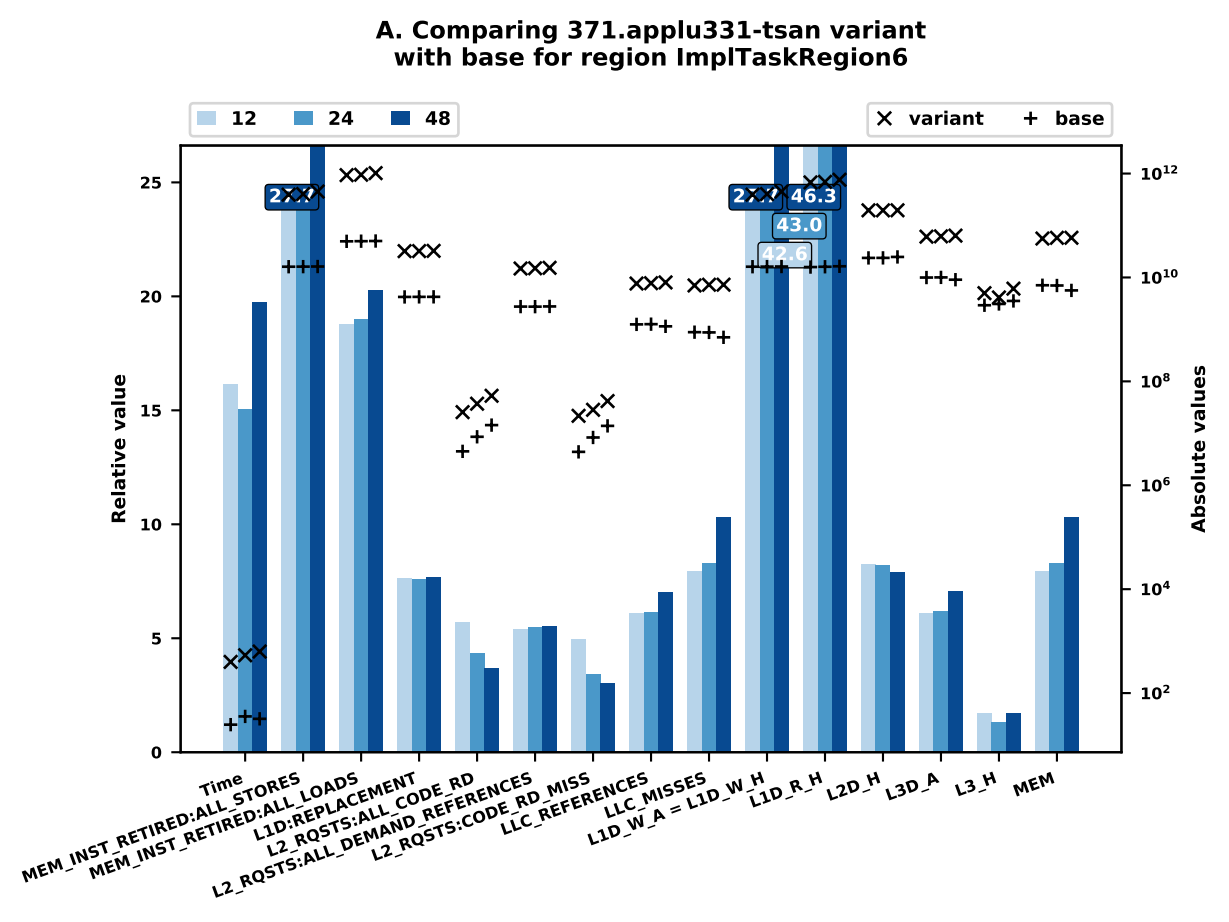

A. Comparing 371.applu331-archer variant
with base for region ImplTaskRegion5
12
24
48
variant
base
63.4
28.1
89.3
44.7
Relative value
Absolute values
0
5
10
15
20
25
10^{7}
10^{5}
10^{3}
10^{1}
10^{-1}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

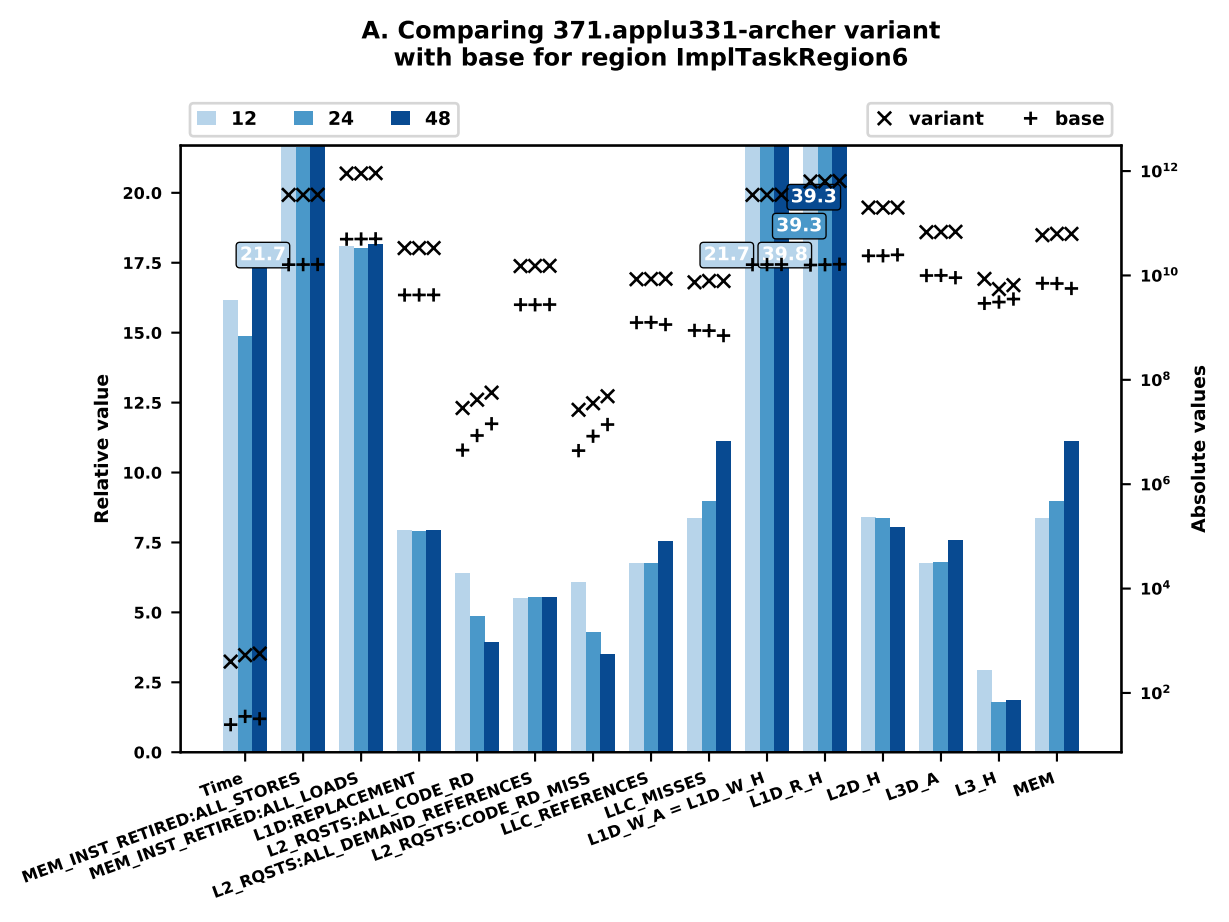

A. Comparing 371.applu331-tsan-noread variant
with base for region ImplTaskRegion6
12
24
48
variant
base
Relative value
Absolute values
0
5
10
15
20
25
10^{2}
10^{4}
10^{6}
10^{8}
10^{10}
10^{12}
45.7
44.0
42.7
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

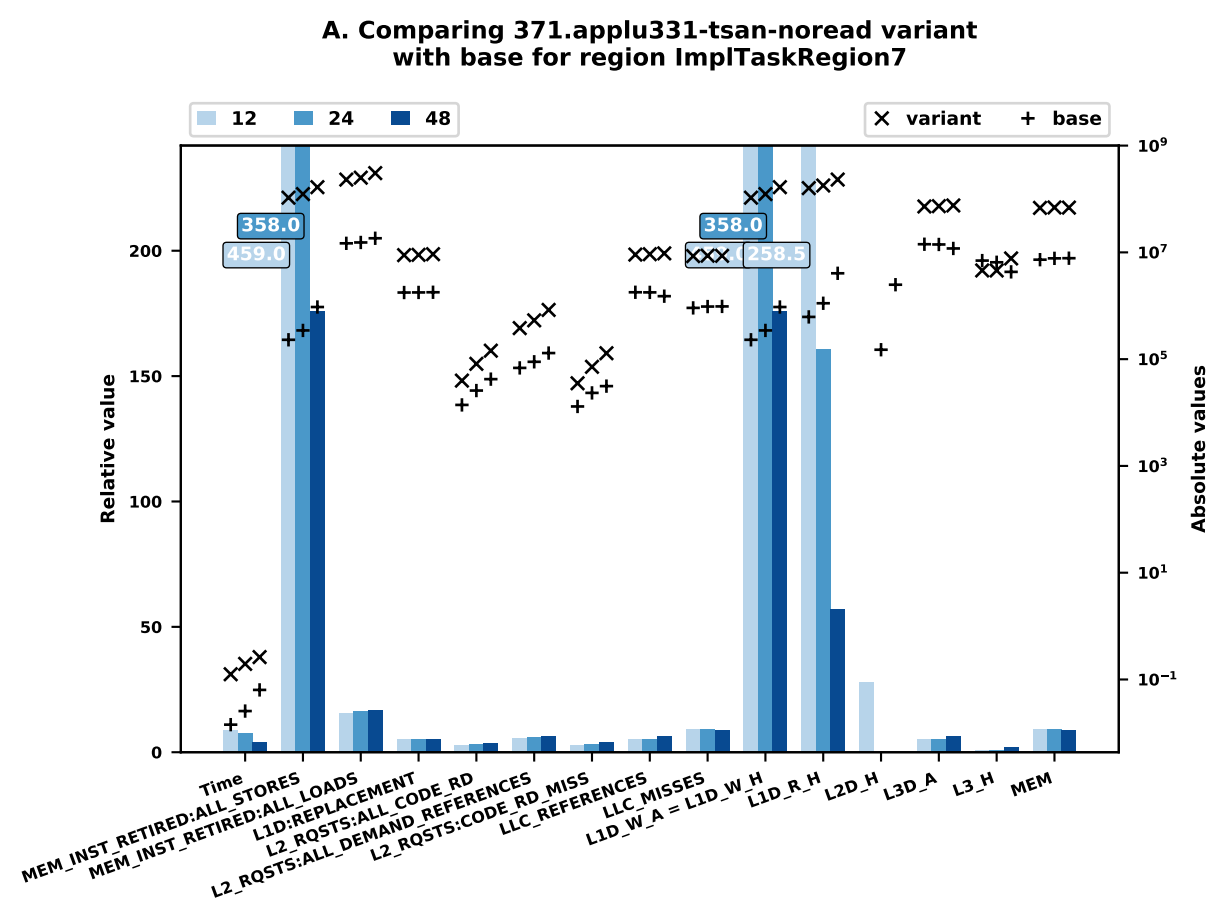

A. Comparing 371.applu331-archer-noread variant
with base for region ImplTaskRegion6
12
24
48
variant
base
Relative value
Absolute values
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0
10^{2}
10^{4}
10^{6}
10^{8}
10^{10}
10^{12}
21.7
21.7
39.2
39.3
39.3
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

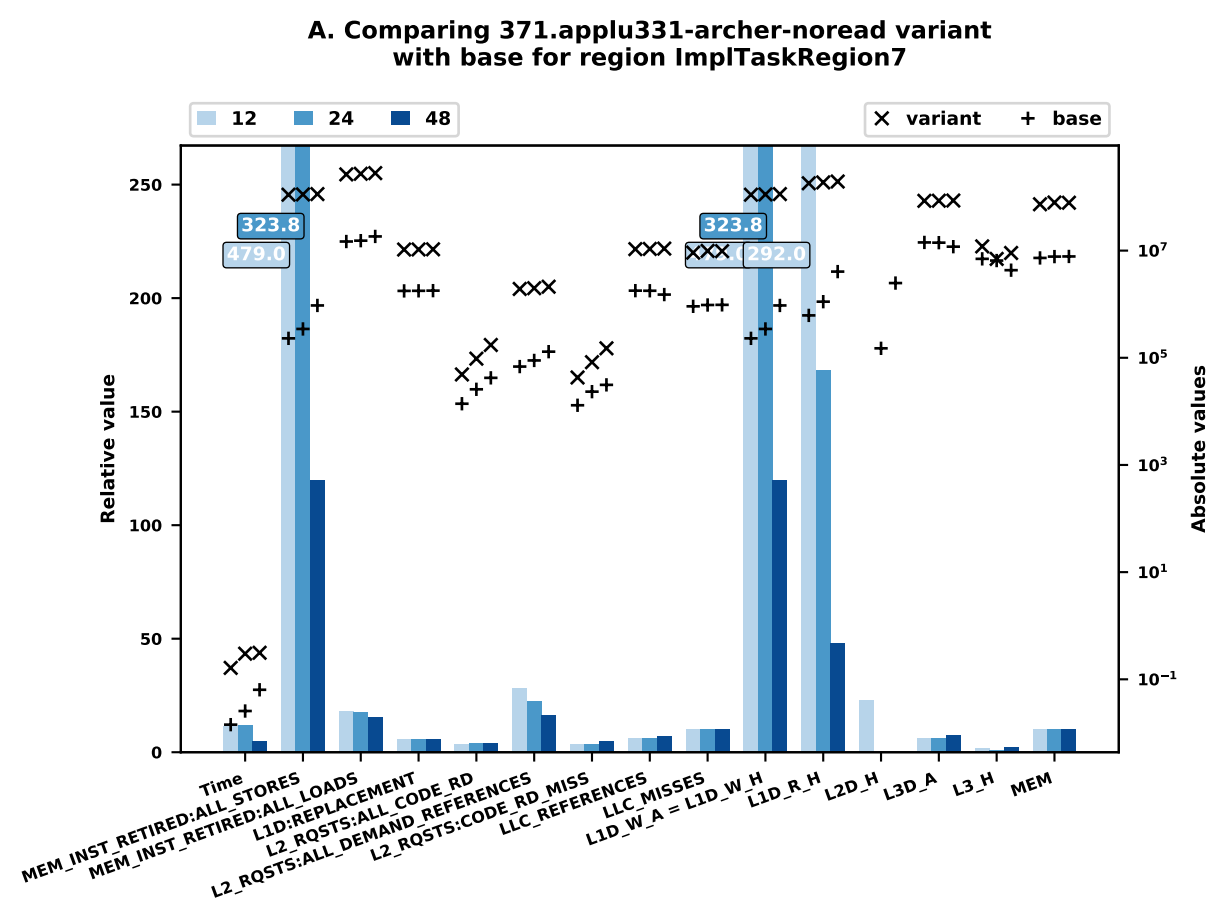

A. Comparing 371.applu331-tsan-sampling variant
with base for region ImplTaskRegion6
12
24
48
variant
base
Relative value
Absolute values
33.0
33.0
53.0
51.0
50.1
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

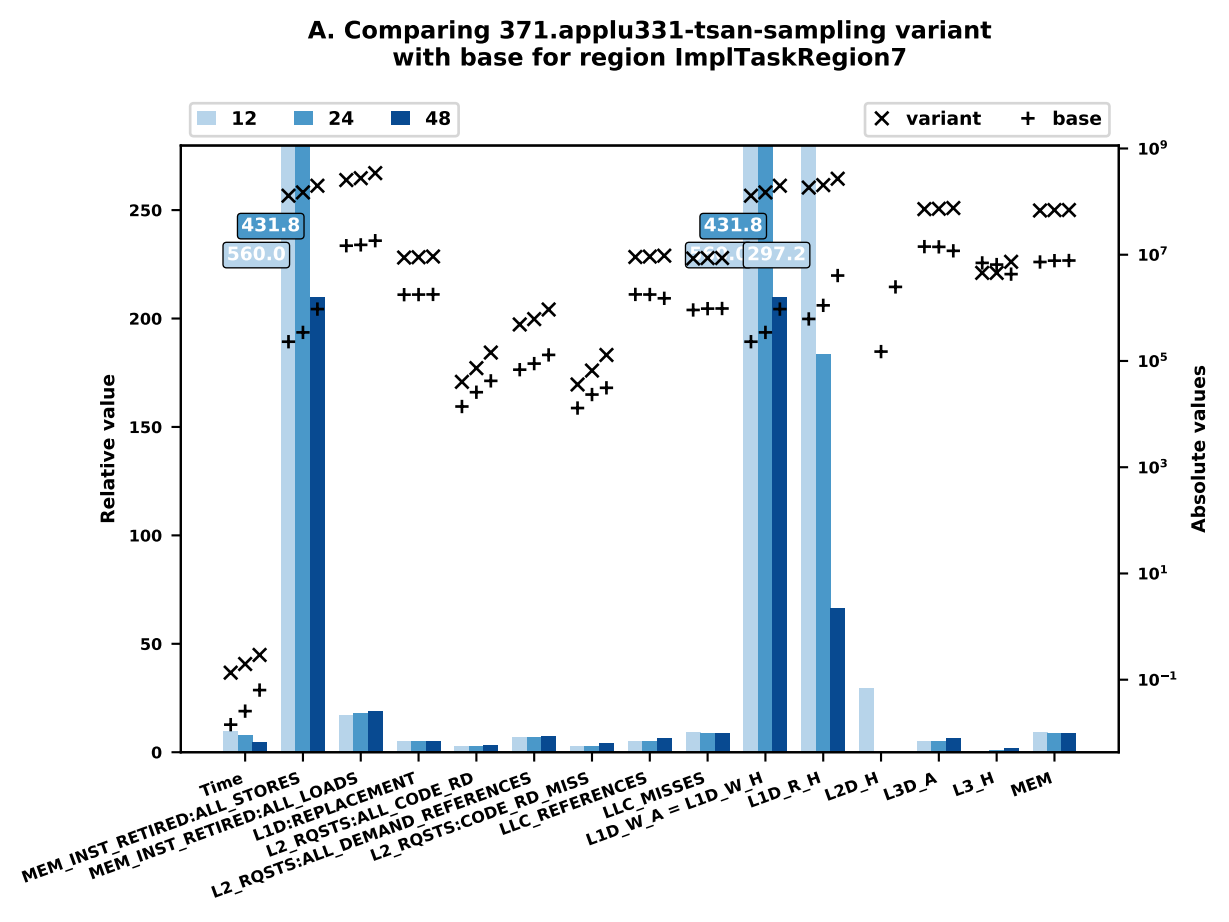

A. Comparing 371.applu331-archer-sampling variant
with base for region ImplTaskRegion6
12
24
48
variant
base
Relative value
Absolute values
30.3
48.0
48.2
30.3
48.7
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

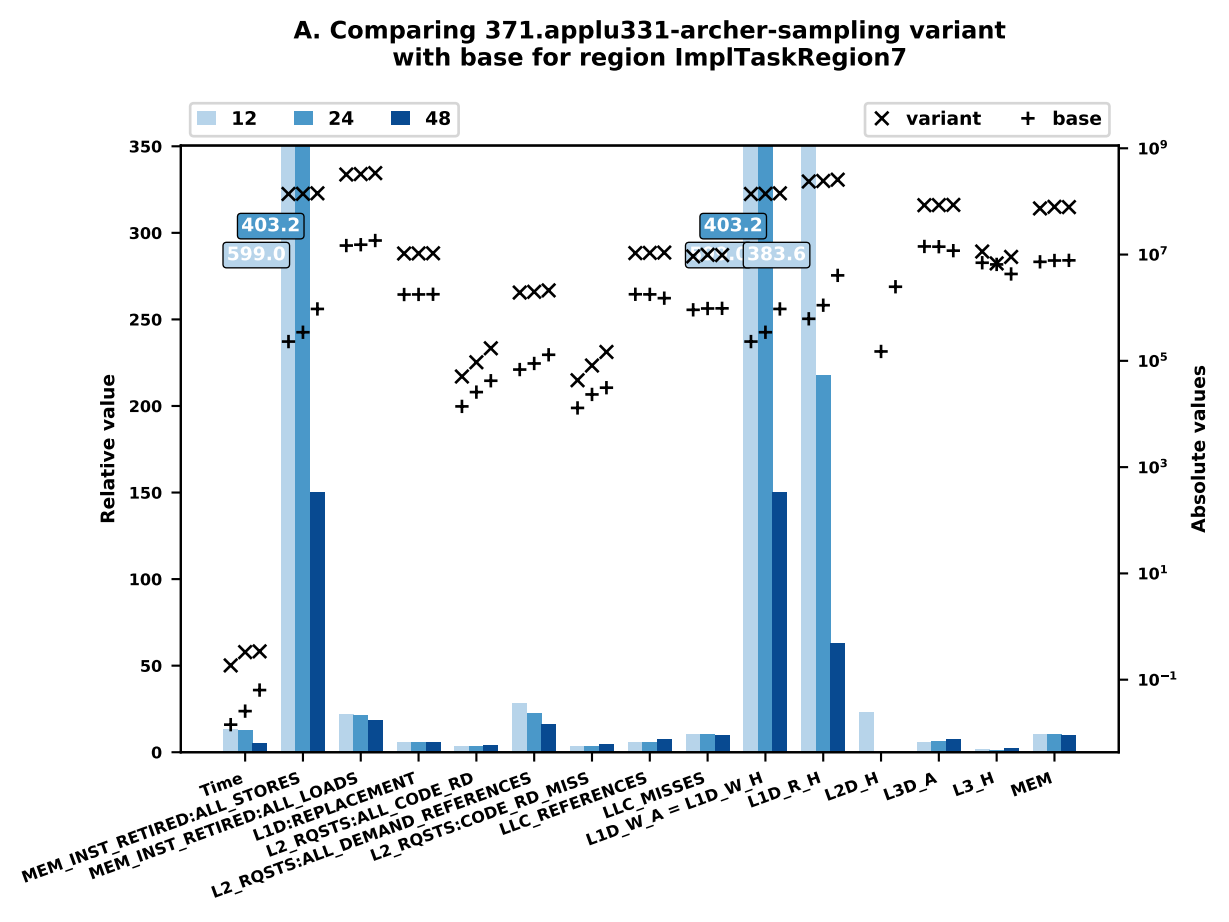

A. Comparing 371.applu331-tsan variant
with base for region ImplTaskRegion6
12
24
48
variant
base
Relative value
Absolute values
0
5
10
15
20
25
10^{2}
10^{4}
10^{6}
10^{8}
10^{10}
10^{12}
46.3
43.0
42.6
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

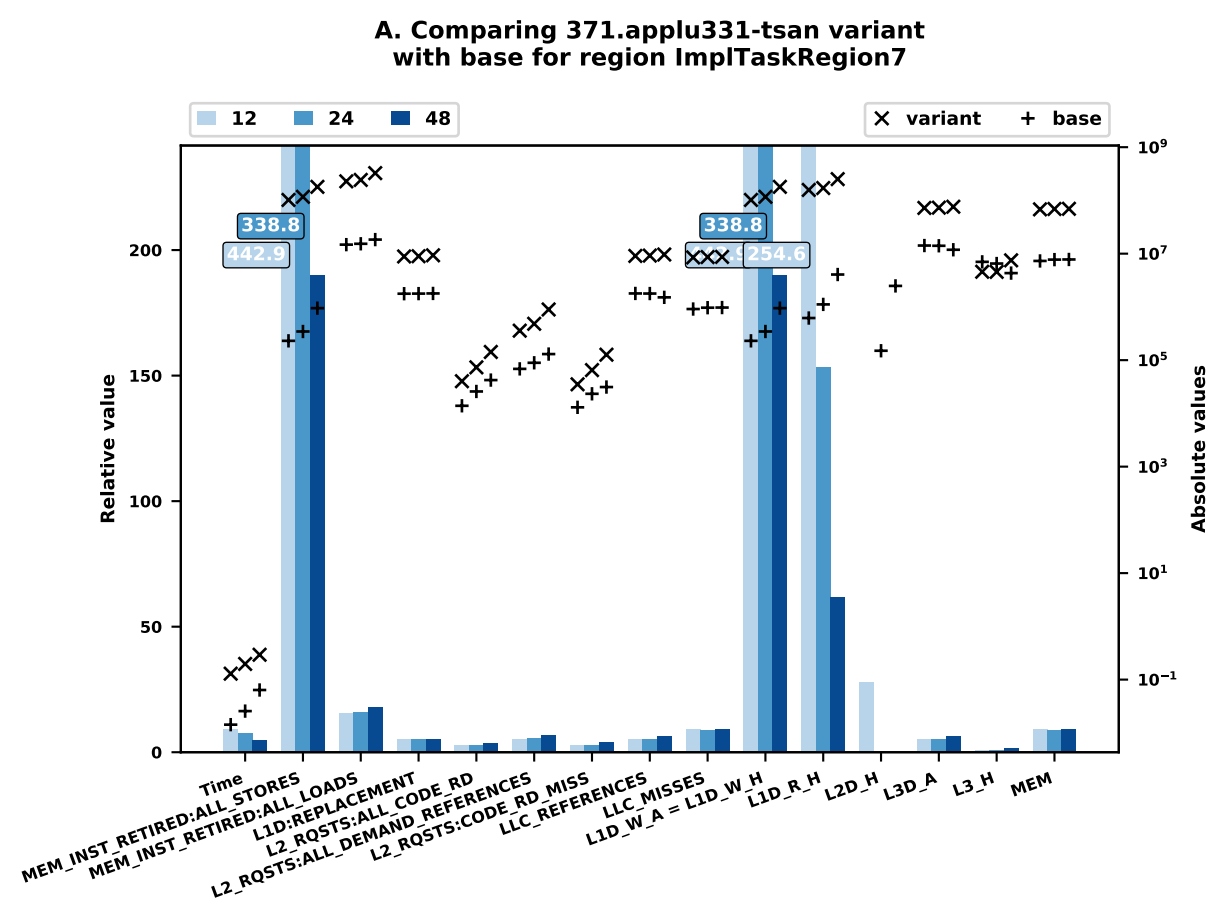

A. Comparing 371.applu331-archer variant
with base for region ImplTaskRegion6
12
24
48
variant
base
Relative value
Absolute values
21.7
21.7
39.3
39.3
39.3
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

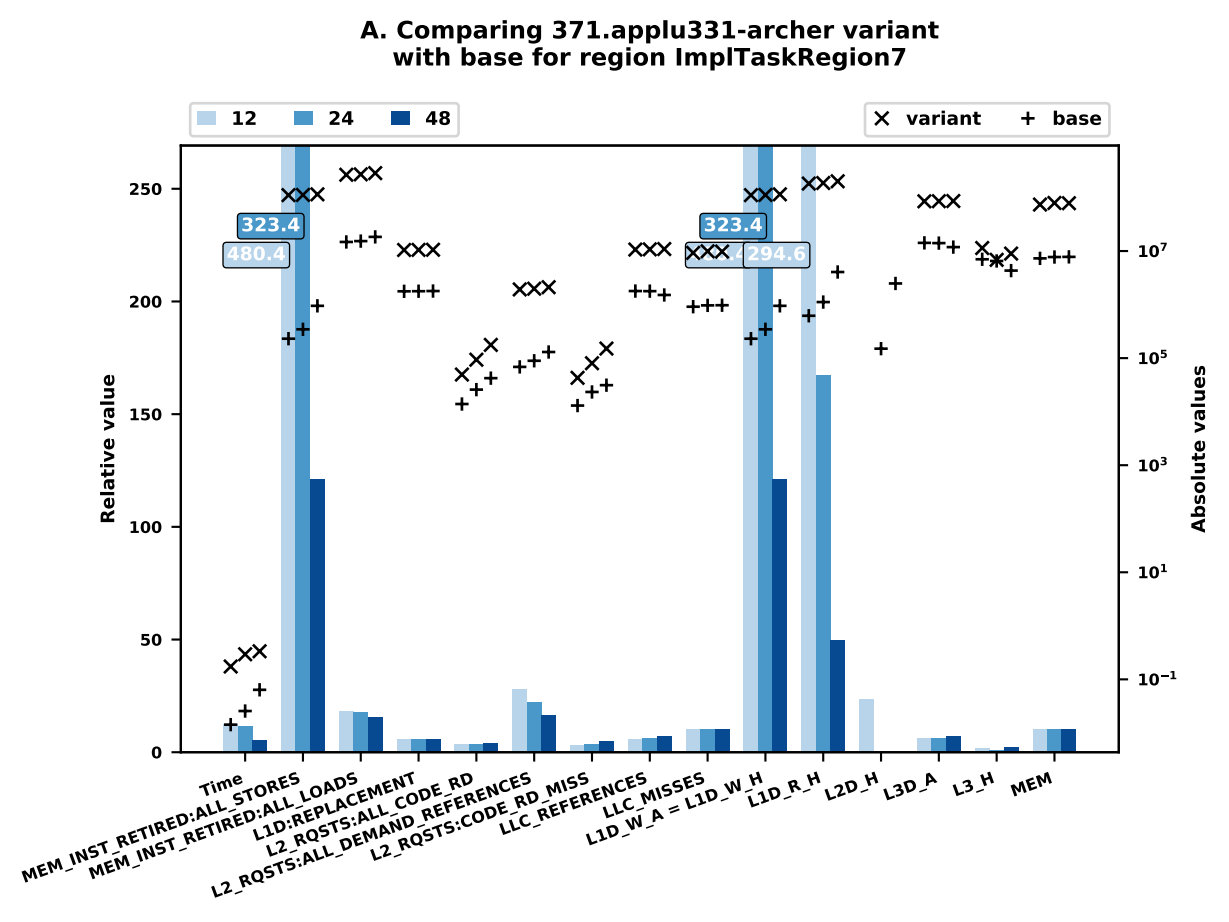

A. Comparing 371.applu331-tsan-noread variant
with base for region ImplTaskRegion7
12
24
48
variant
base
Relative value
Absolute values
358.0
459.0
358.0
258.5
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

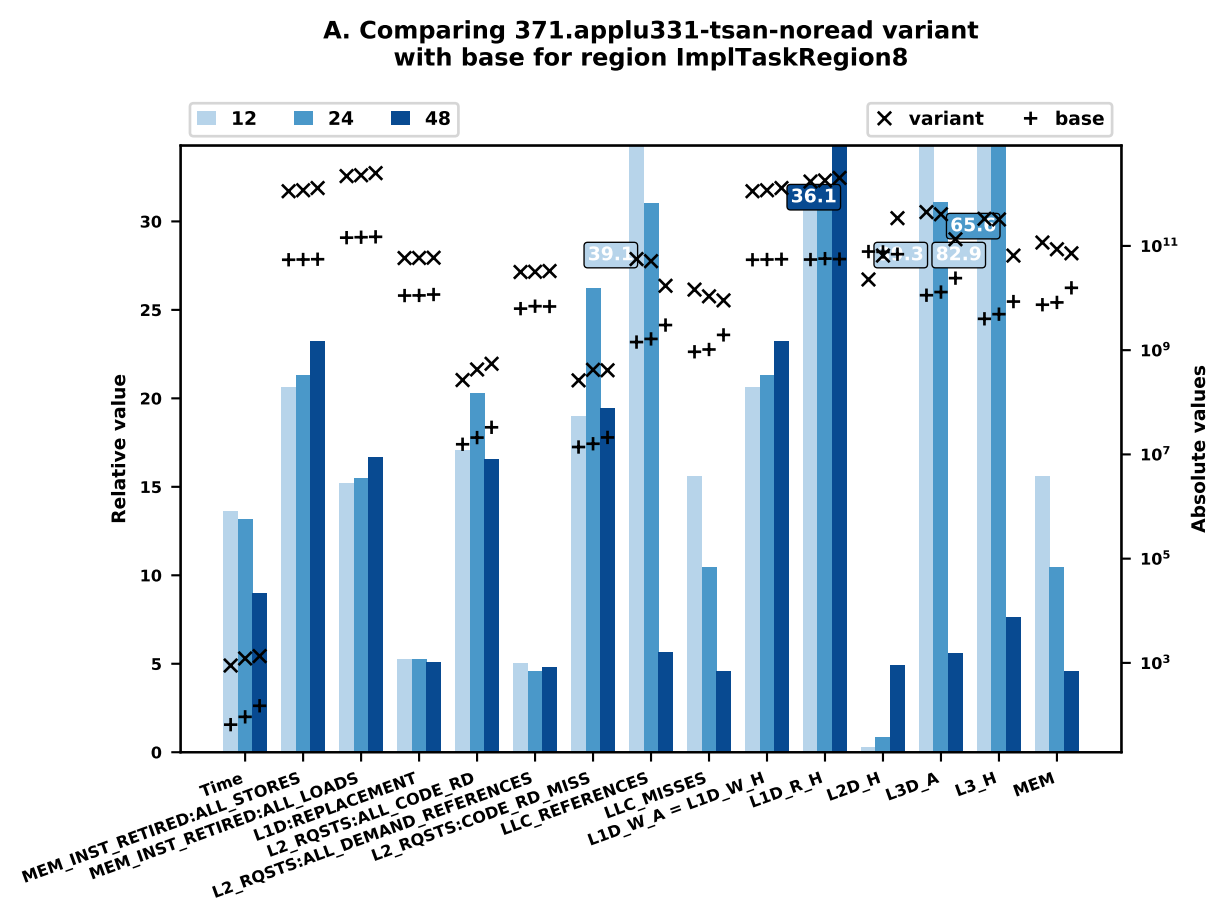

A. Comparing 371.applu331-archer-noread variant
with base for region ImplTaskRegion7
12
24
48
variant
base
Relative value
Absolute values
323.8
479.0
323.8
292.0
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

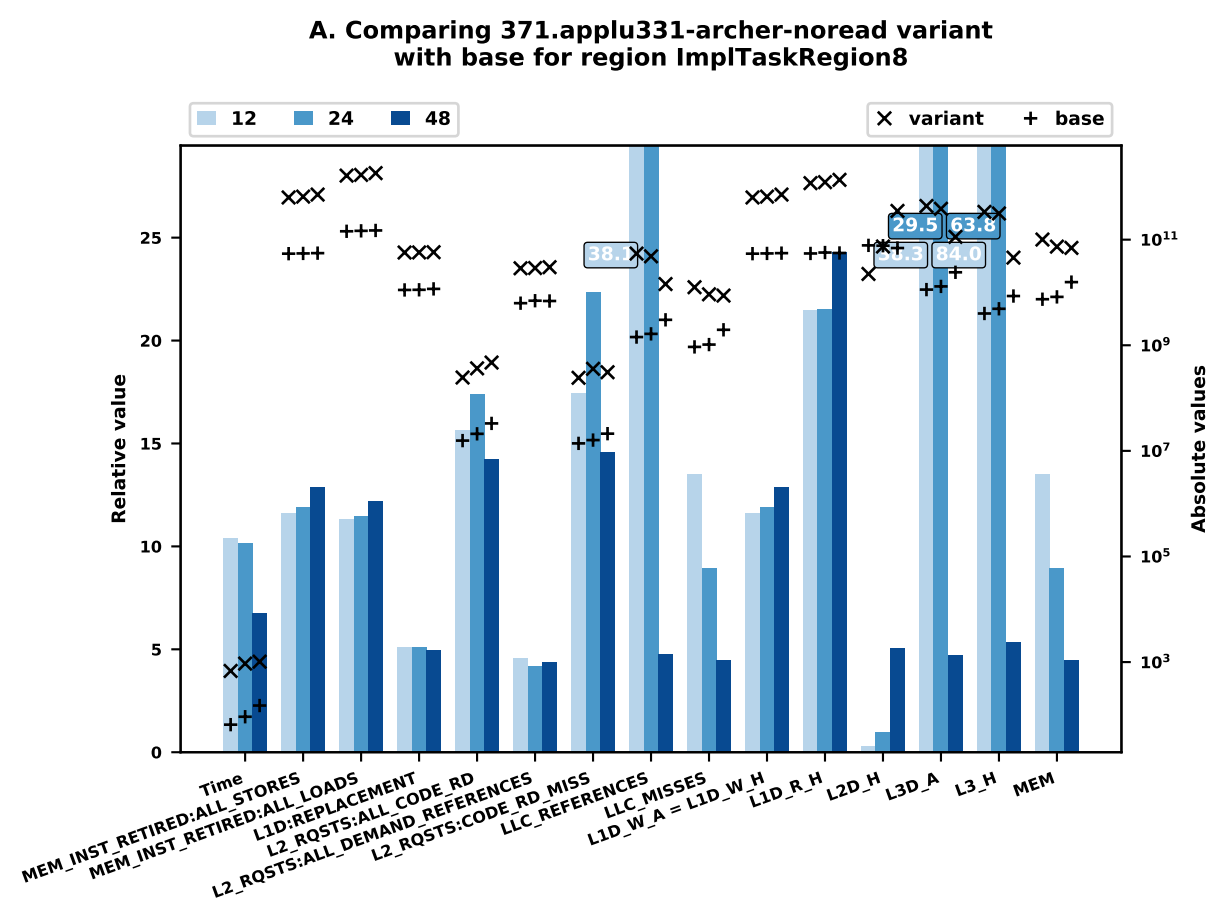

A. Comparing 371.applu331-tsan-sampling variant
with base for region ImplTaskRegion7
12
24
48
variant
base
Relative value
Absolute values
431.8
560.0
431.8
297.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

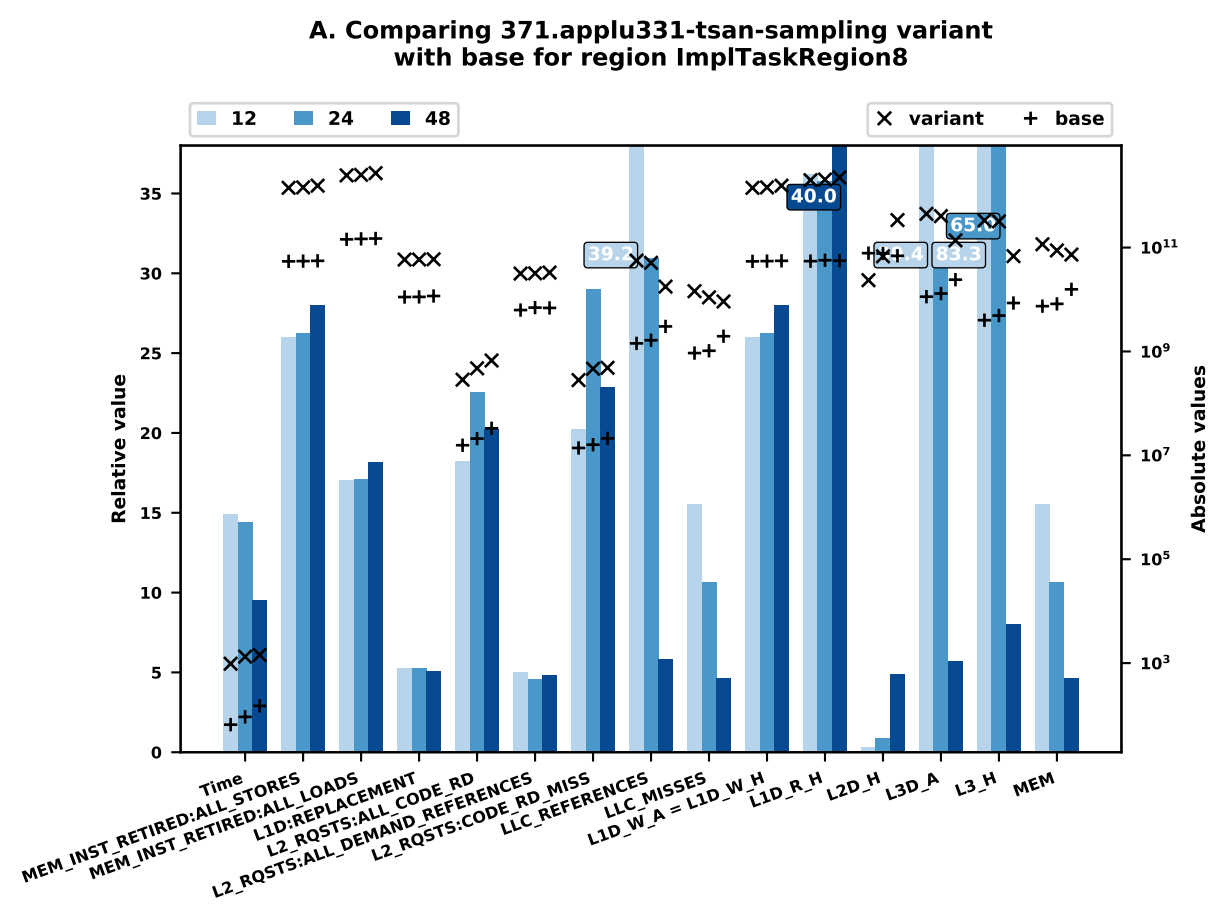

A. Comparing 371.applu331-archer-sampling variant
with base for region ImplTaskRegion7
12
24
48
variant
base
Relative value
Absolute values
403.2
599.0
403.2
383.6
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

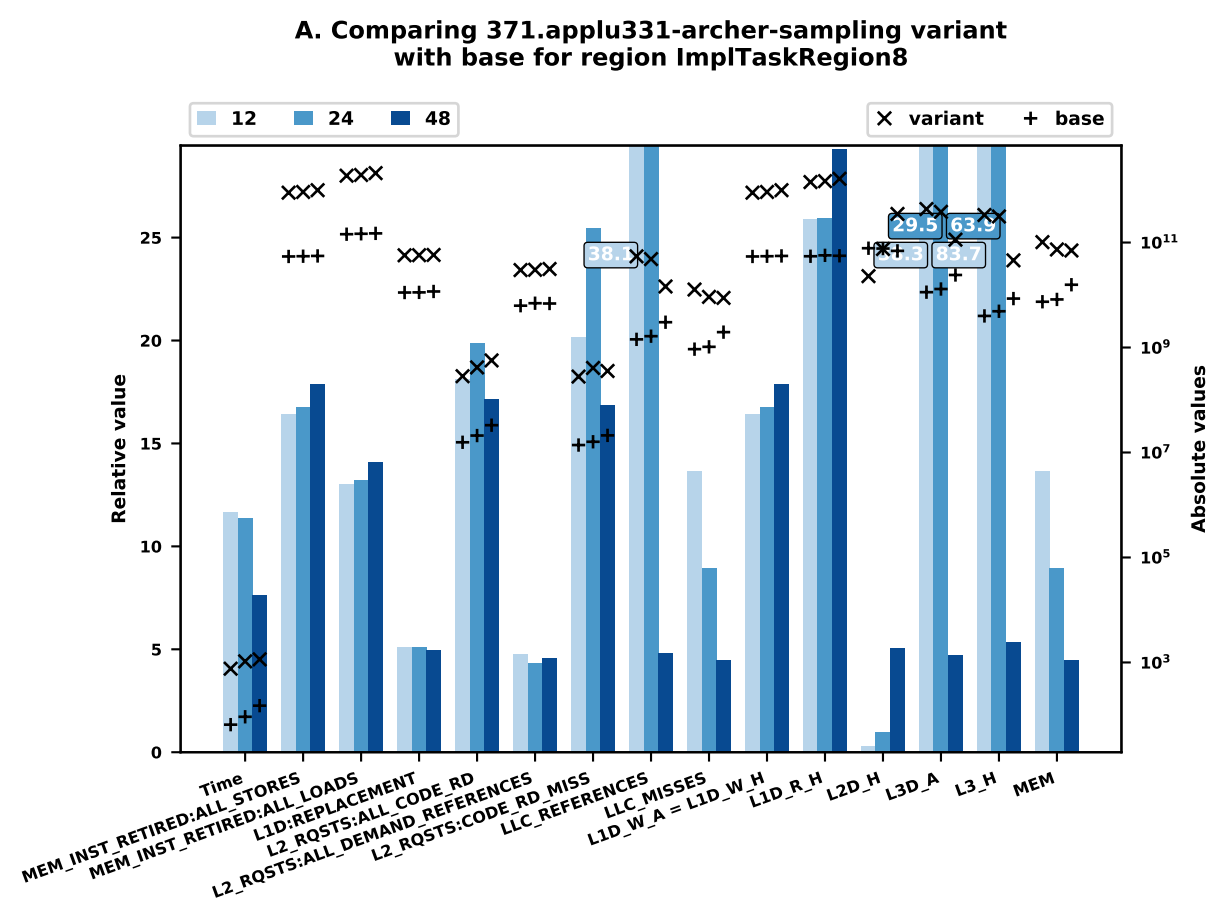

A. Comparing 371.applu331-tsan variant
with base for region ImplTaskRegion7
12
24
48
variant
base
Relative value
Absolute values
338.8
442.9
338.8
254.6
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

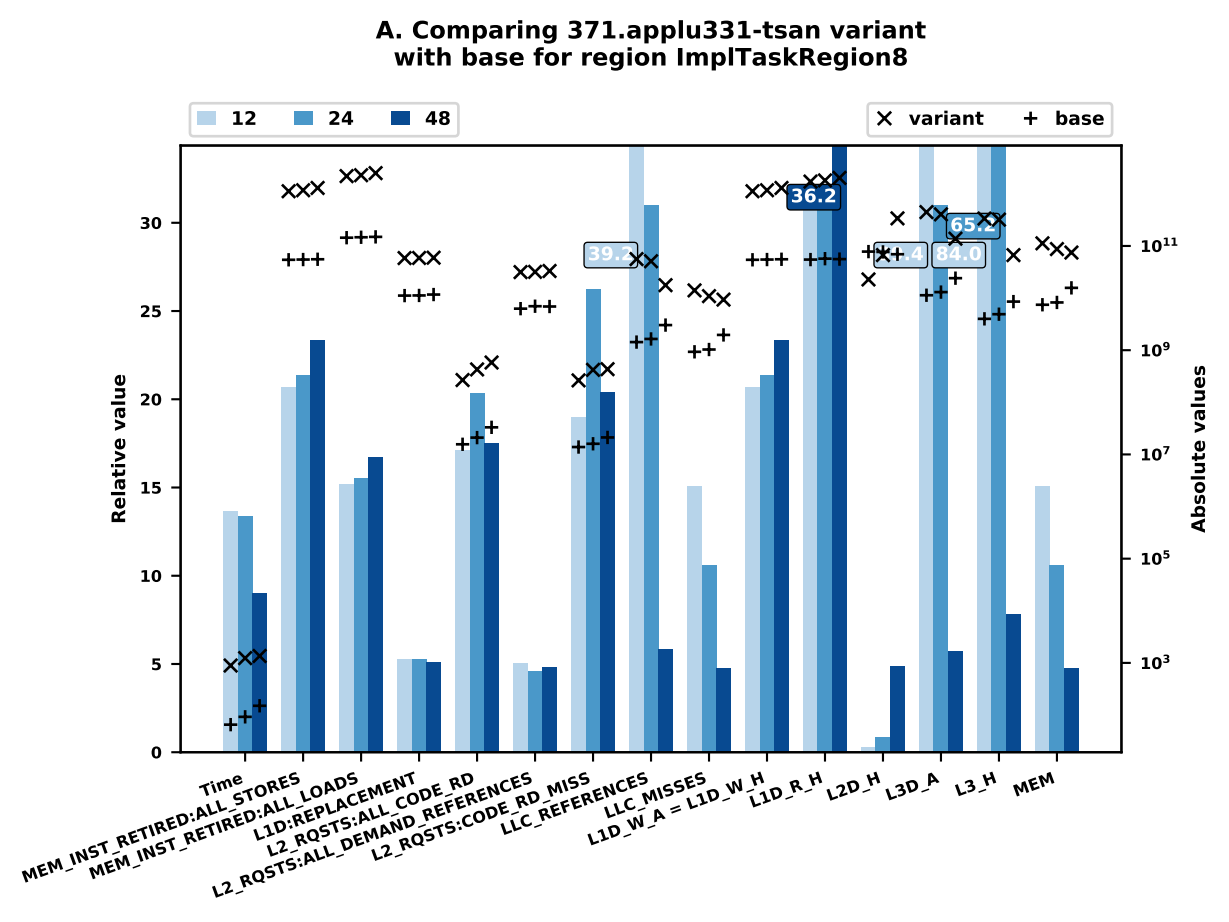

A. Comparing 371.applu331-archer variant
with base for region ImplTaskRegion7
12
24
48
variant
base
Relative value
Absolute values
323.4
480.4
323.4
294.6
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

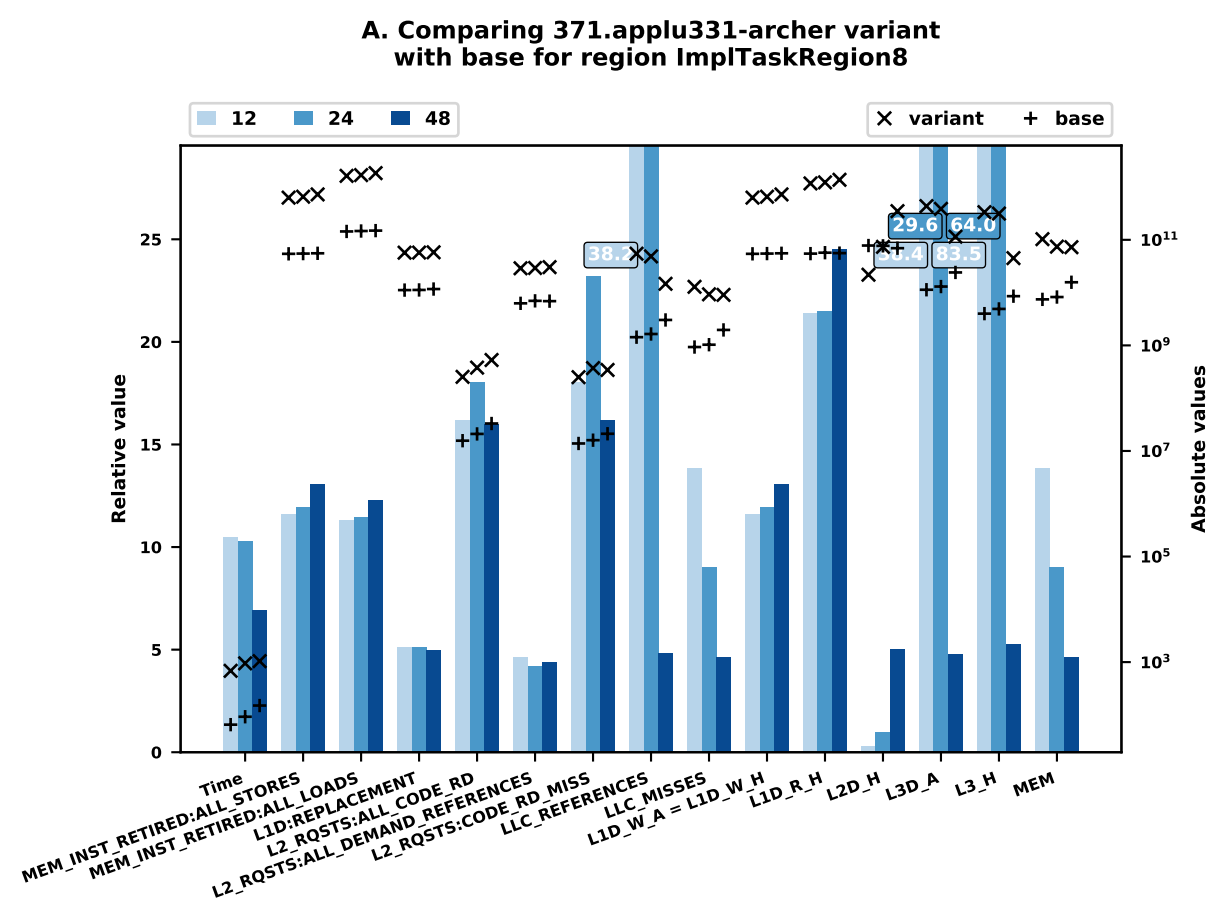

A. Comparing 371.applu331-tsan-noread variant
with base for region ImplTaskRegion8
12
24
48
variant
base
Relative value
Absolute values
0
5
10
15
20
25
30
10^{3}
10^{5}
10^{7}
10^{9}
10^{11}
36.1
65.0
82.9
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

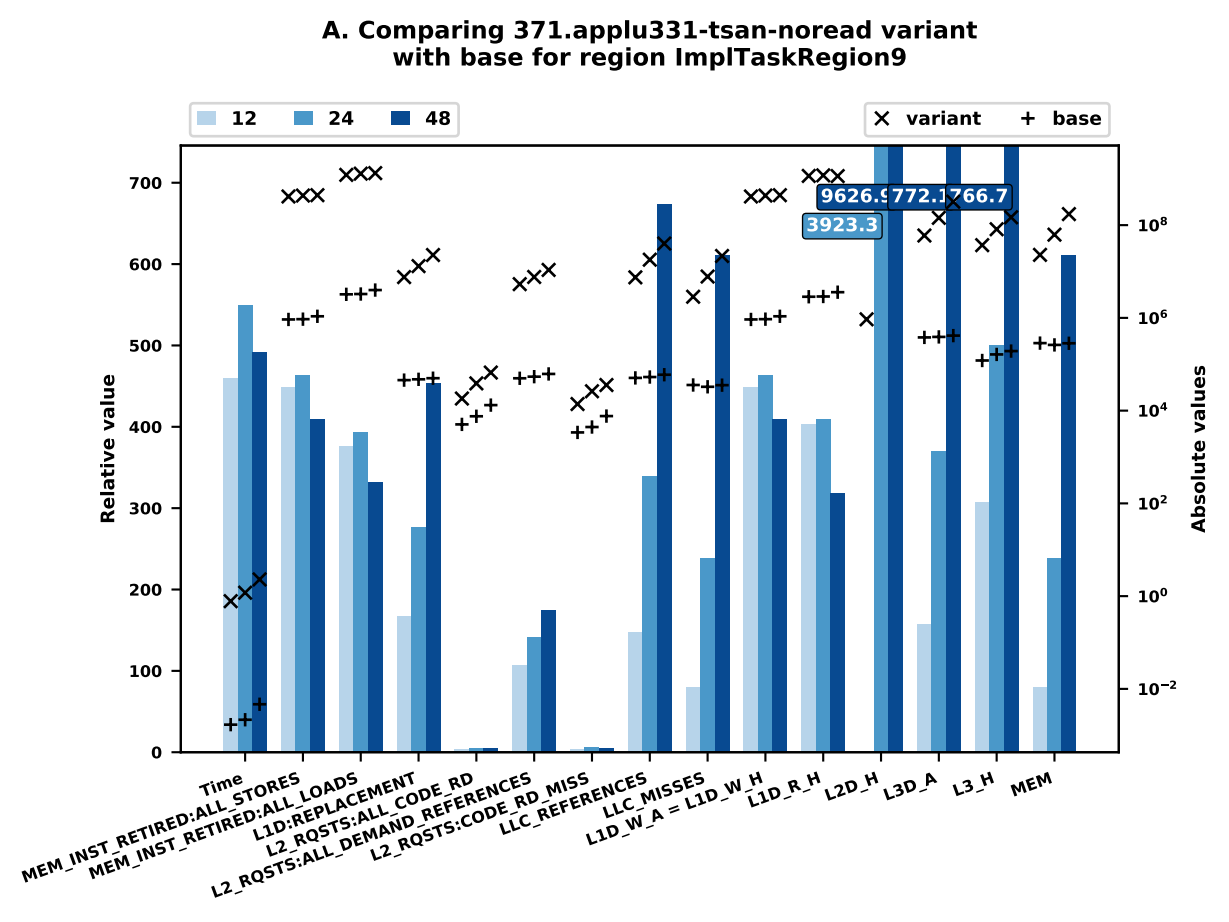

A. Comparing 371.applu331-archer-noread variant
with base for region ImplTaskRegion8
12
24
48
variant
base
Relative value
Absolute values
0
5
10
15
20
25
10^{3}
10^{5}
10^{7}
10^{9}
10^{11}
38.1
29.5
63.8
30.3
84.0
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

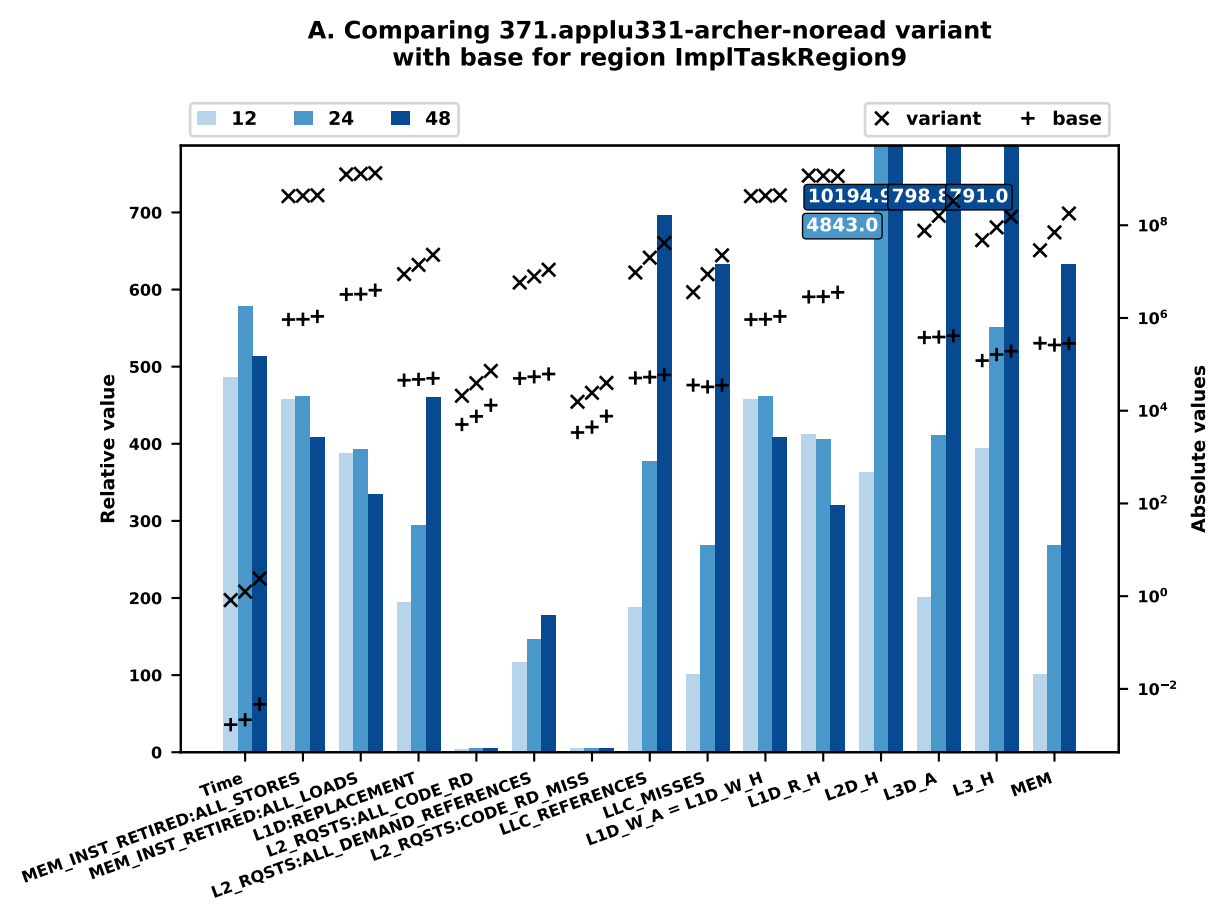

A. Comparing 371.applu331-tsan-sampling variant
with base for region ImplTaskRegion8
12
24
48
variant
base
Relative value
Absolute values
0
5
10
15
20
25
30
35
10^{3}
10^{5}
10^{7}
10^{9}
10^{11}
39.2
40.0
65.2
83.3
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

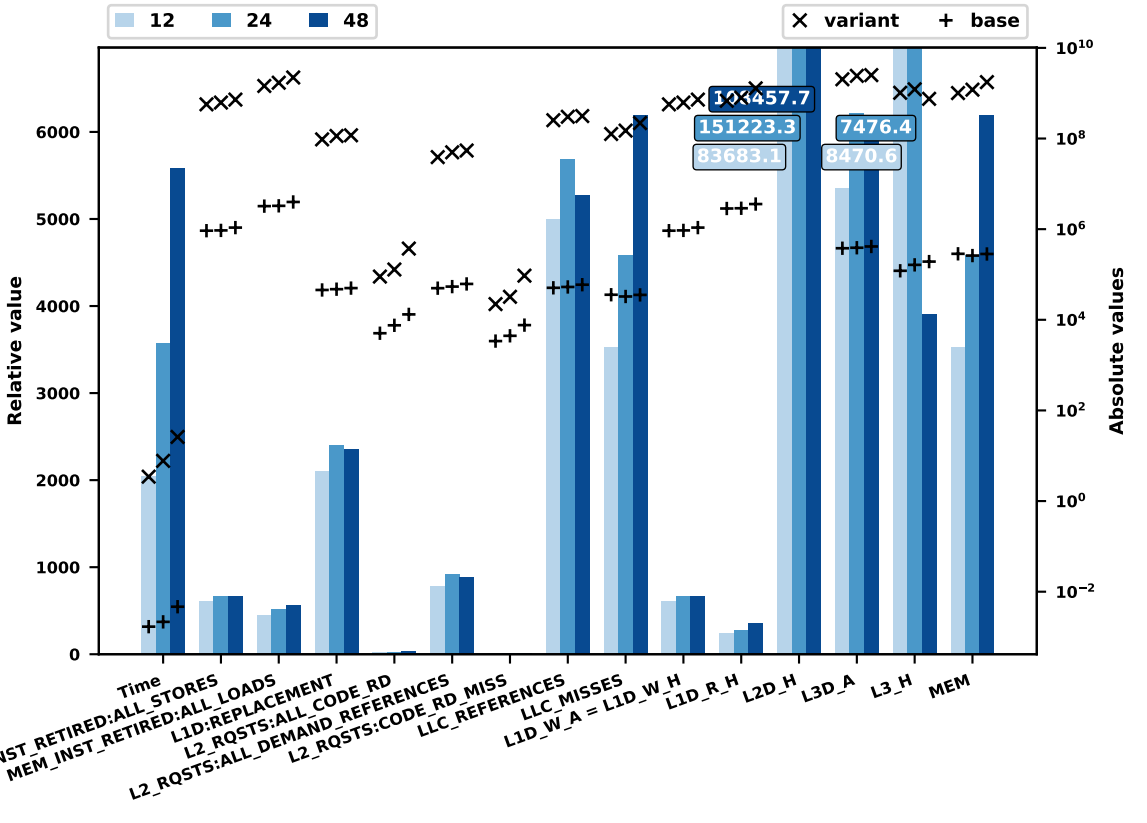

A. Comparing 371.applu331-archer-sampling variant
with base for region ImplTaskRegion8
12
24
48
variant
base
Relative value
Absolute values
0
5
10
15
20
25
10^{3}
10^{5}
10^{7}
10^{9}
10^{11}
38.1
29.5
63.9
83.7
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

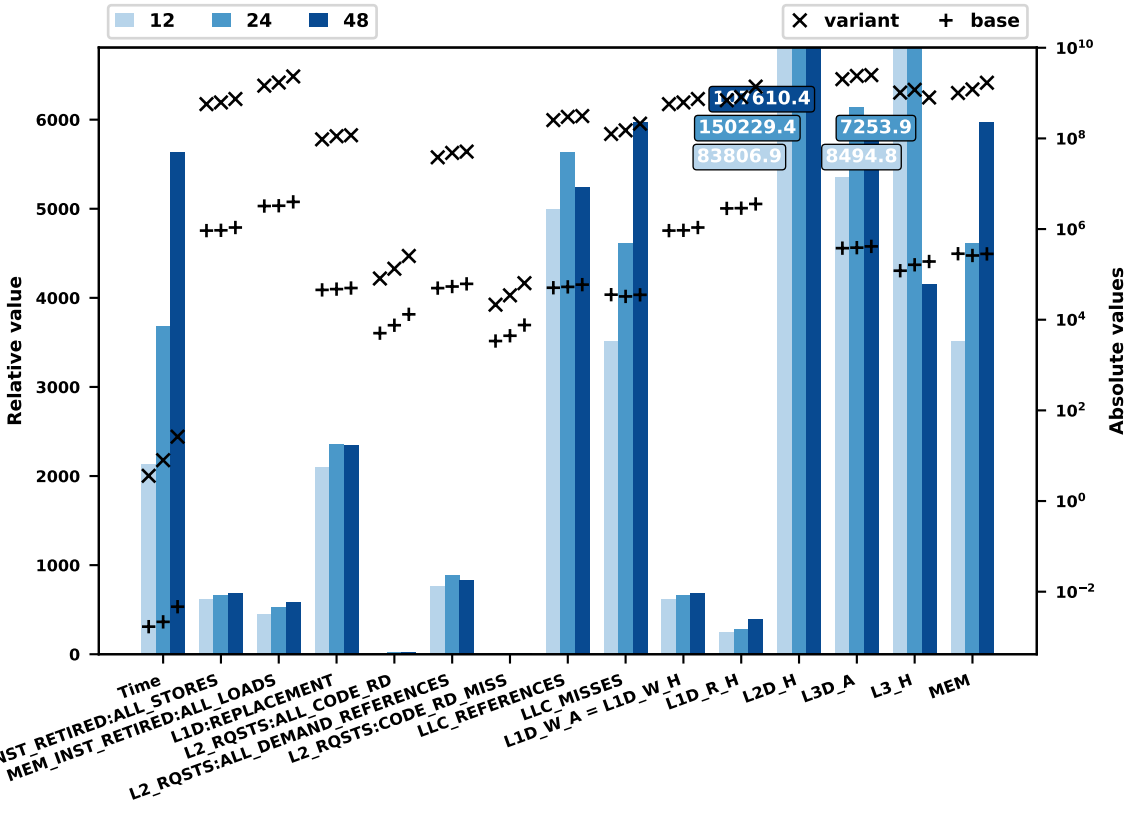

A. Comparing 371.applu331-tsan variant
with base for region ImplTaskRegion8
12
24
48
variant
base
Relative value
Absolute values
0
5
10
15
20
25
30
10^{3}
10^{5}
10^{7}
10^{9}
10^{11}
39.2
36.2
65.2
84.0
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

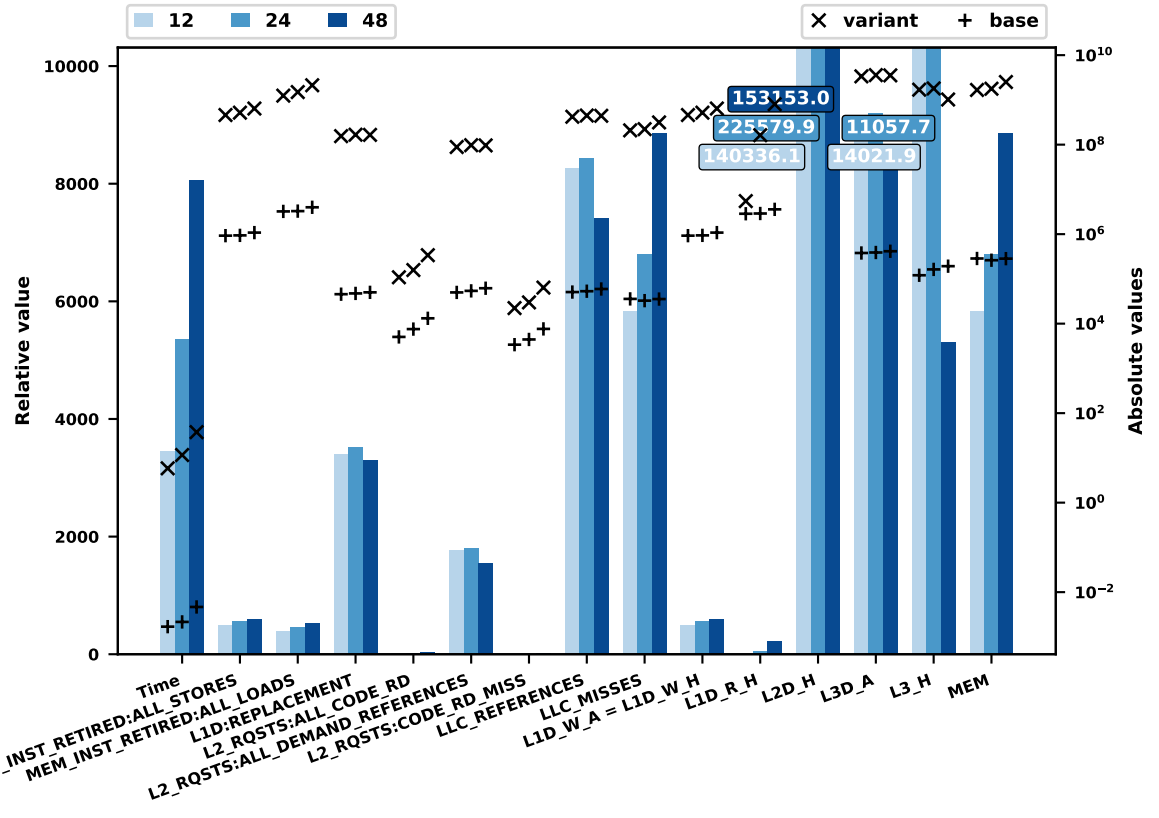

A. Comparing 371.applu331-archer variant
with base for region ImplTaskRegion8
12
24
48
variant
base
Relative value
Absolute values
0
5
10
15
20
25
10^{3}
10^{5}
10^{7}
10^{9}
10^{11}
38.2
29.6
64.0
30.4
83.5
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

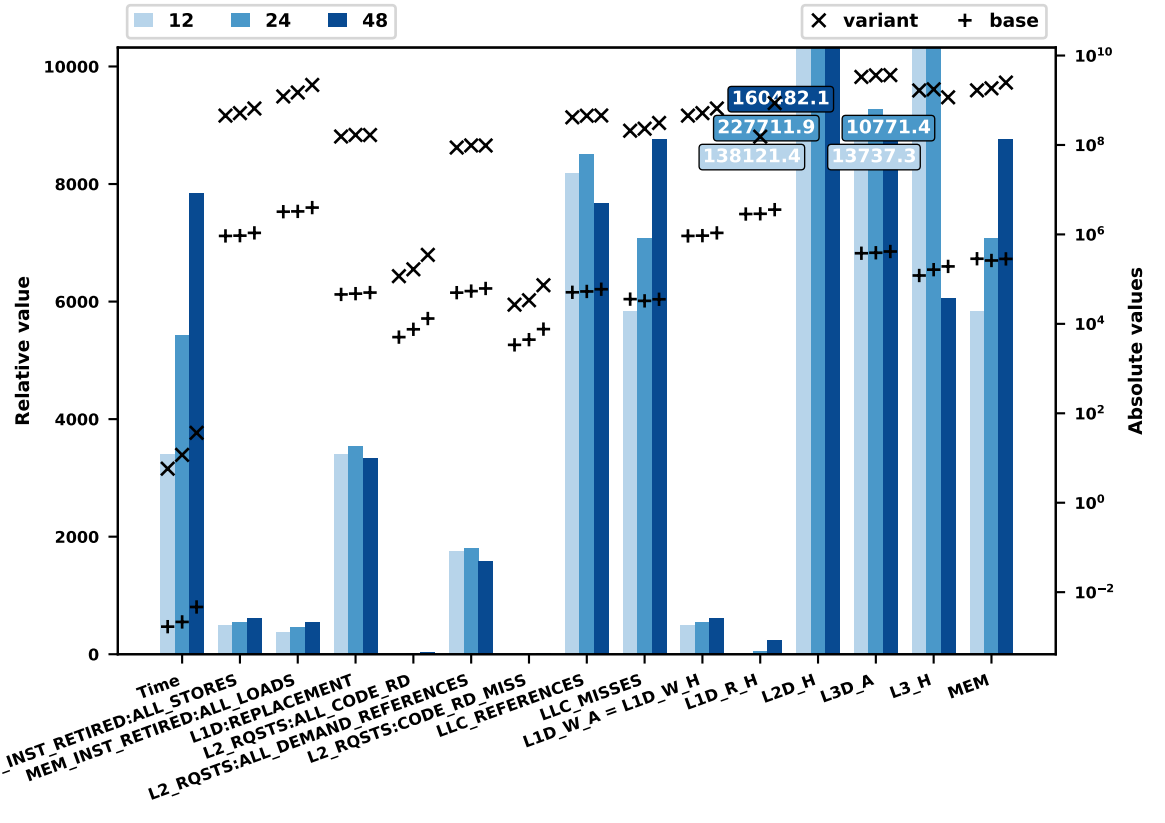

A. Comparing 371.applu331-tsan-noread variant
with base for region ImplTaskRegion9
12
24
48
variant
base
Relative value
Absolute values
9626.9
772.1
766.7
3923.3
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

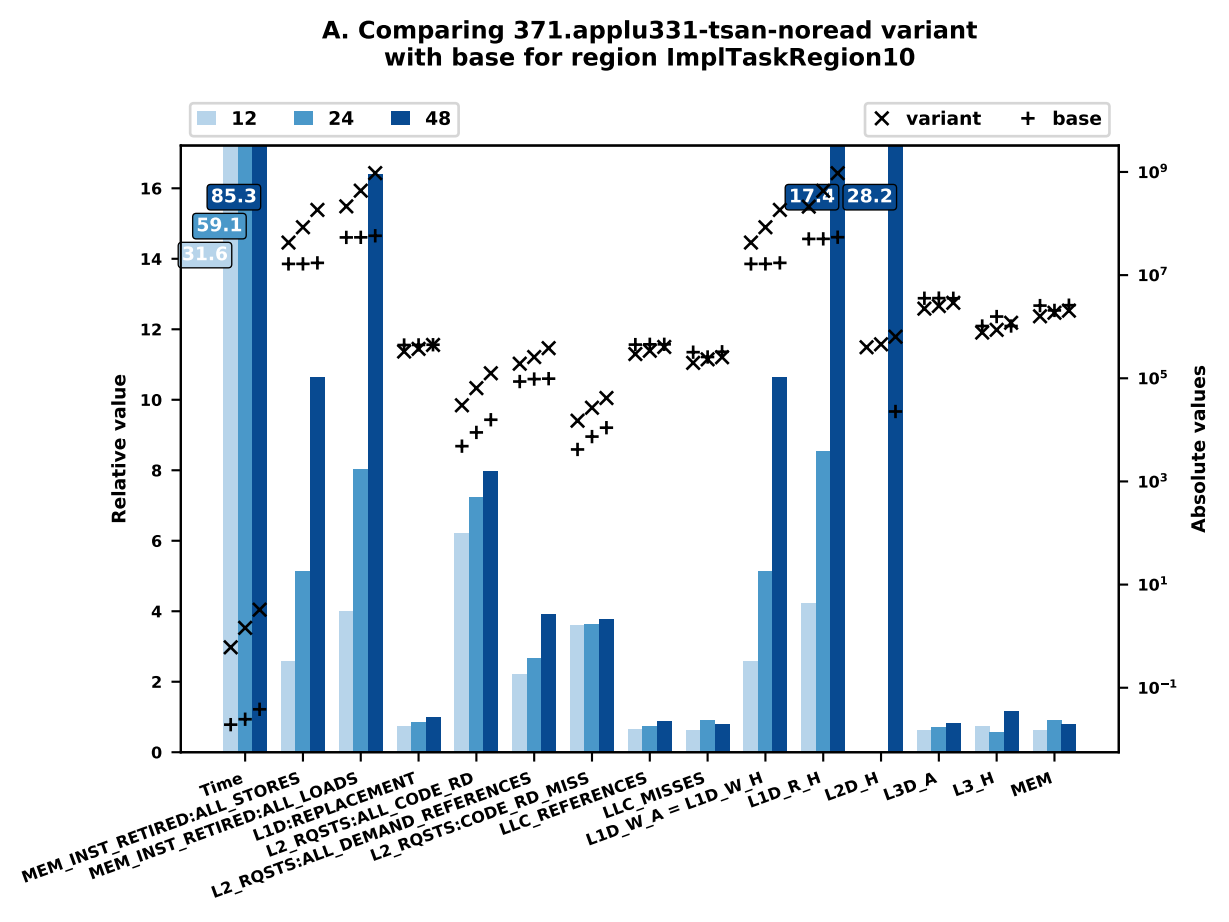

A. Comparing 371.applu331-archer-noread variant
with base for region ImplTaskRegion9
12
24
48
variant
base
Relative value
Absolute values
0
100
200
300
400
500
600
700
10^{8}
10^{6}
10^{4}
10^{2}
10^{0}
10^{-2}
10194.9
798.8
791.0
4843.0
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

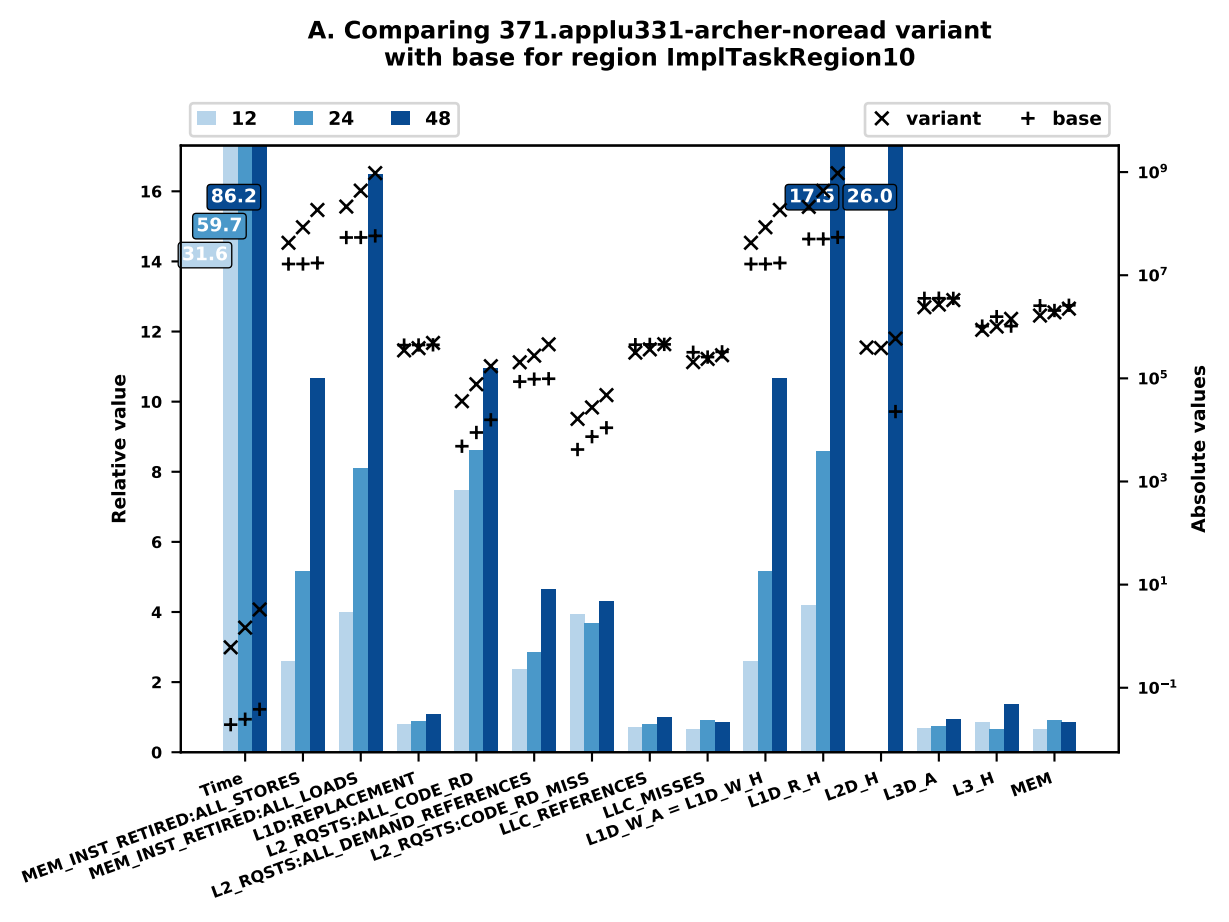

A. Comparing 371.applu331-tsan-sampling variant
with base for region ImplTaskRegion9
12
24
48
variant
base
Relative value
Absolute values
0
1000
2000
3000
4000
5000
6000
10^{10}
10^{8}
10^{6}
10^{4}
10^{2}
10^{0}
10^{-2}
104457.7
151223.3
83683.1
7476.4
8470.6
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

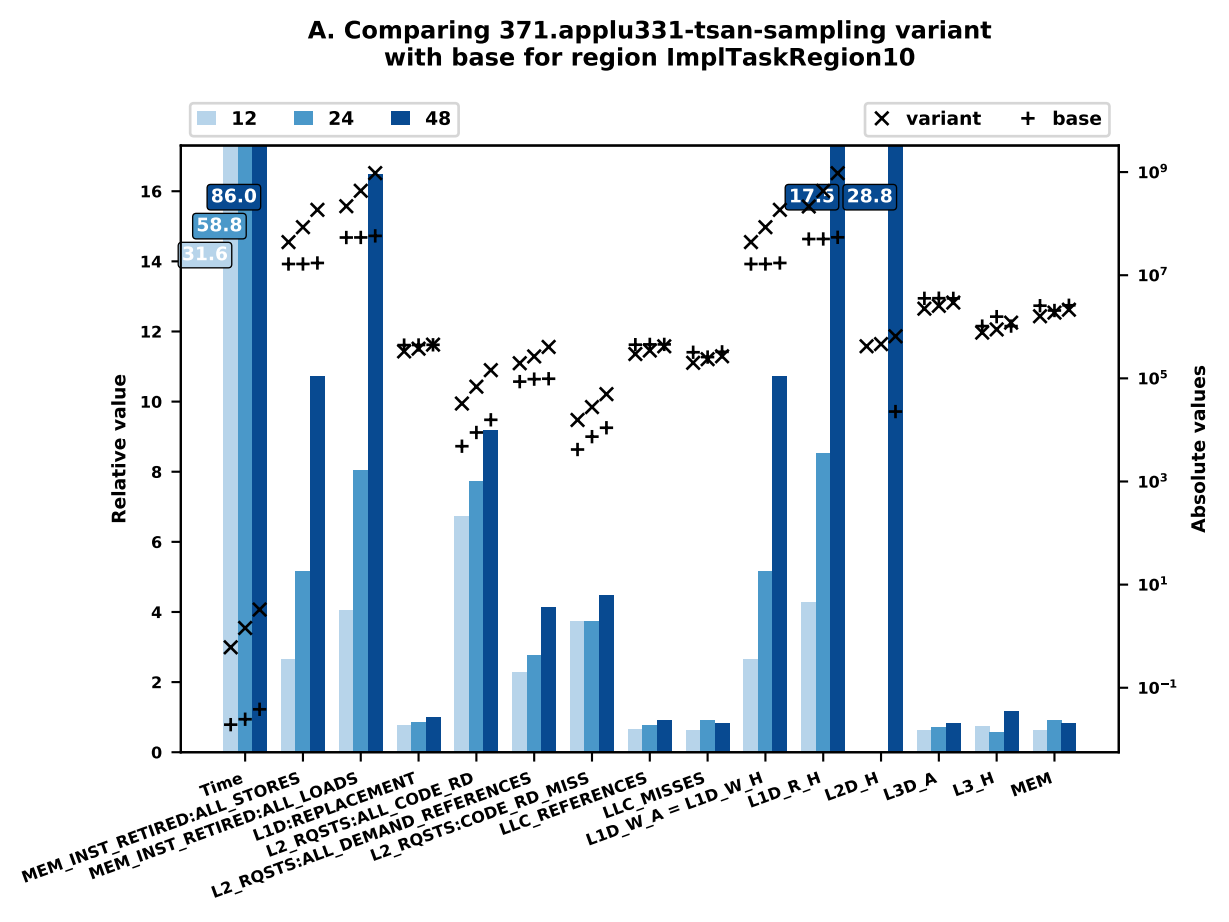

A. Comparing 371.applu331-archer-sampling variant
with base for region ImplTaskRegion9
12
24
48
variant
base
Relative value
Absolute values
0
1000
2000
3000
4000
5000
6000
10^{10}
10^{8}
10^{6}
10^{4}
10^{2}
10^{0}
10^{-2}
107610.4
150229.4
83806.9
7253.9
8494.8
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

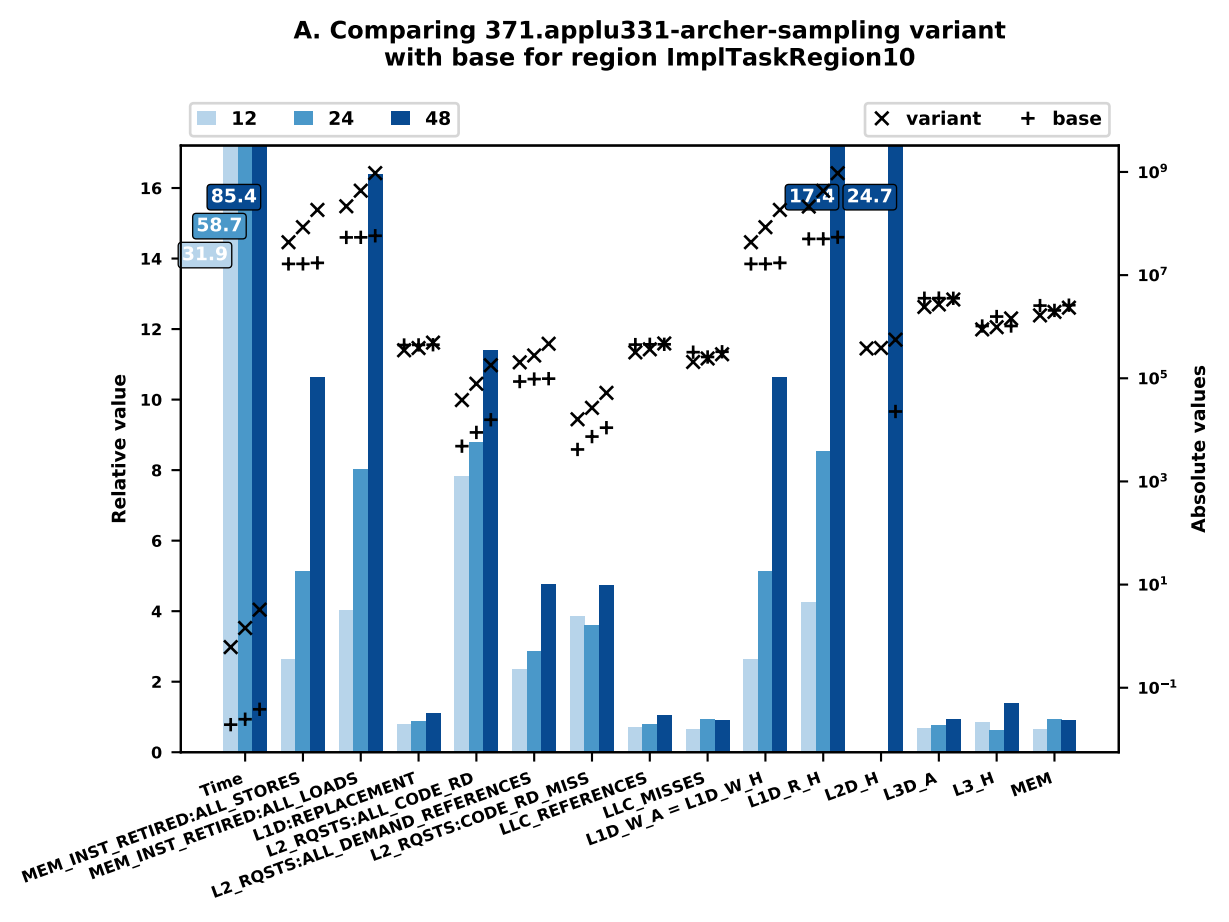

A. Comparing 371.applu331-tsan variant
with base for region ImplTaskRegion9
12
24
48
variant
base
Relative value
Absolute values
10000
8000
6000
4000
2000
0
10^{10}
10^{8}
10^{6}
10^{4}
10^{2}
10^{0}
10^{-2}
153153.0
225579.9
140336.1
11057.7
14021.9
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

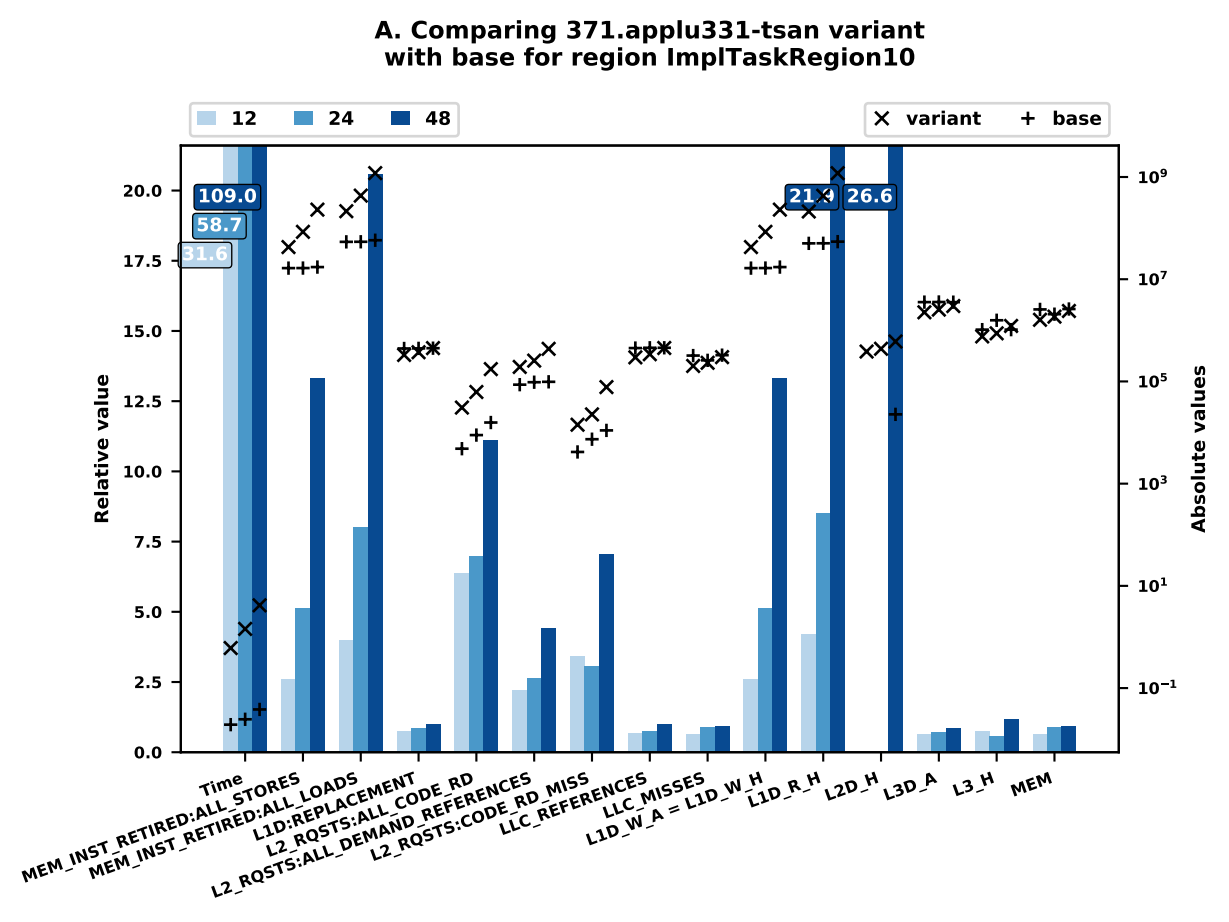

A. Comparing 371.applu331-archer variant
with base for region ImplTaskRegion9
12
24
48
variant
base
Relative value
Absolute values
10000
8000
6000
4000
2000
0
10^{10}
10^{8}
10^{6}
10^{4}
10^{2}
10^{0}
10^{-2}
160482.1
227711.9
138121.4
10771.4
13737.3
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

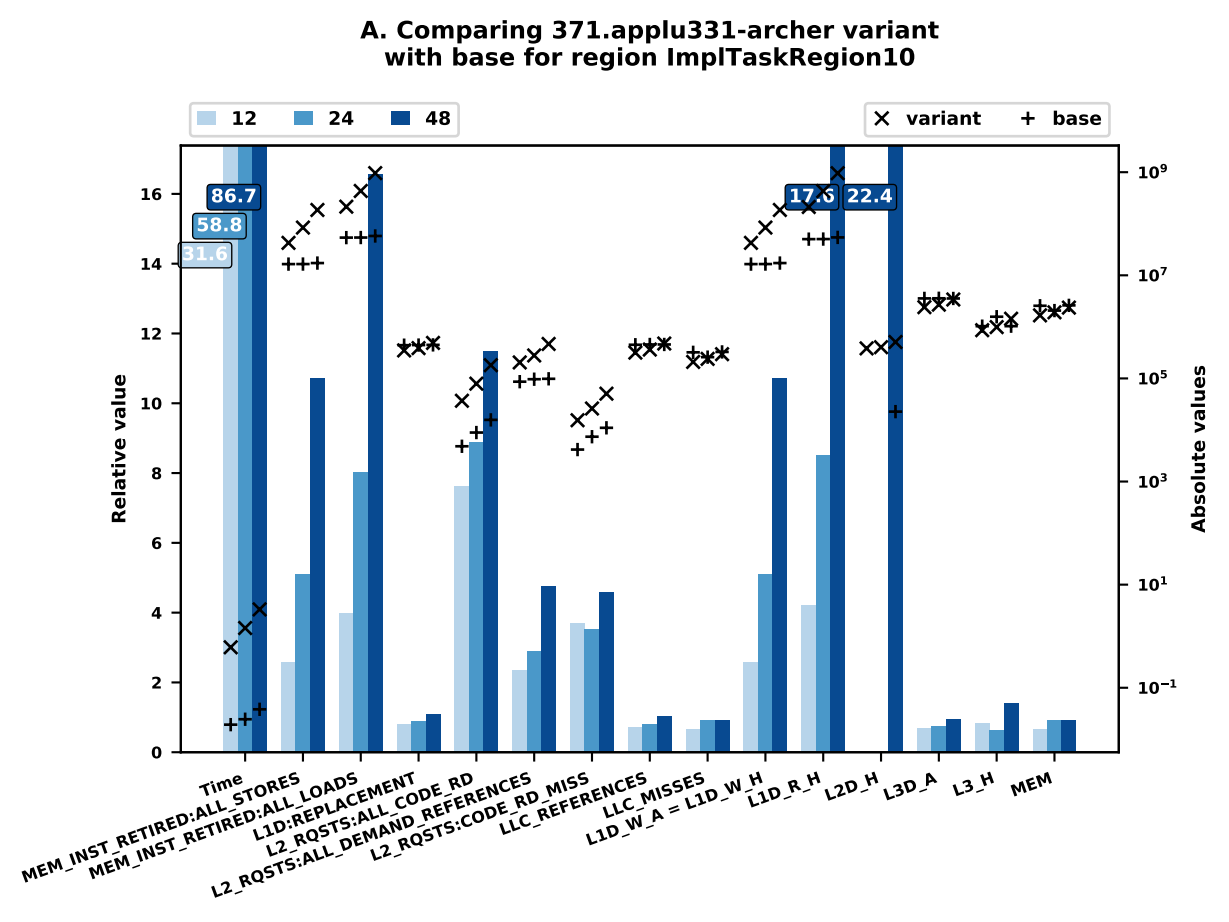

A. Comparing 371.applu331-tsan-noread variant
with base for region ImplTaskRegion10
12
24
48
variant
base
85.3
59.1
31.6
17.4
28.2
Relative value
Absolute values
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM


A. Comparing 371.applu331-archer-noread variant
with base for region ImplTaskRegion10
12
24
48
variant
base
Relative value
Absolute values
86.2
59.7
31.6
17.5
26.0
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM


A. Comparing 371.applu331-tsan-sampling variant
with base for region ImplTaskRegion10
12
24
48
variant
base
86.0
58.8
31.6
17.5
28.8
Relative value
Absolute values
0
2
4
6
8
10
12
14
16
10^{9}
10^{7}
10^{5}
10^{3}
10^{1}
10^{-1}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM


A. Comparing 371.applu331-archer-sampling variant
with base for region ImplTaskRegion10
12
24
48
variant
base
85.4
58.7
31.9
17.4
24.7
Relative value
Absolute values
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM


A. Comparing 371.applu331-tsan variant
with base for region ImplTaskRegion10
12
24
48
variant
base
109.0
58.7
31.6
21.9
26.6
Relative value
Absolute values
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0
10^{9}
10^{7}
10^{5}
10^{3}
10^{1}
10^{-1}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM


A. Comparing 371.applu331-archer variant
with base for region ImplTaskRegion10
12
24
48
variant
base
86.7
58.8
31.6
17.6
22.4
Relative value
Absolute values
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM