

Register analysis results

*: for SPEC benchmarks: test workload was chosen
**: workload: approx. 150 MB text file sourced from /dev/urandom

Static: Number of times the register is mentioned in the binary. Computed statically by parsing and analysing the **Run via:** ./translator -a -f <binary>
Dynamic: Number of register accesses during execution. Computed dynamically by logging each read/write to a pro **Run via:** ./translator -p -f <binary> [guest arguments]

Ranked hitlist		Static analysis												Ranked hitlist	Average		
Access frequency		sort		gzip	602.gcc_s		605.mcf_s		620.omnetpp_s		631.deepsjeng_s		Average	Access frequency	Static Hits		
1	x15/a5	16,79%	x15/a5	22,71%	x15/a5	17,92%	x15/a5	16,79%	x15/a5	13,80%	x15/a5	16,87%	x15/a5	17,12%	1	77,32%	mapped
	x0/zero	12,16%	x0/zero	11,50%	x0/zero	13,24%	x0/zero	12,20%	x2/sp	12,09%	x0/zero	11,82%	x0/zero	12,23%	2		
	x14/a4	8,79%	x14/a4	10,06%	x14/a4	9,25%	x14/a4	8,93%	x10/a0	11,35%	x14/a4	9,33%	x10/a0	9,19%	3		
	x10/a0	8,16%	x10/a0	7,09%	x10/a0	8,78%	x10/a0	7,71%	x0/zero	9,41%	x10/a0	7,91%	x14/a4	8,44%	4		
	x2/sp	8,11%	x8/s0/fp	6,98%	x1/ra	8,56%	x2/sp	7,48%	x1/ra	9,29%	x2/sp	7,36%	x1/ra	8,02%	5		
	x8/s0/fp	5,84%	x2/sp	6,77%	x2/sp	6,80%	x13/a3	6,01%	x8/s0/fp	7,38%	x13/a3	6,24%	x2/sp	8,01%	6		
	x13/a3	5,52%	x13/a3	5,38%	x8/s0/fp	4,90%	x8/s0/fp	5,79%	x14/a4	5,45%	x8/s0/fp	5,44%	x8/s0/fp	5,58%	7		
	x11/a1	4,21%	x11/a1	3,73%	x13/a3	4,46%	x12/a2	4,32%	x11/a1	5,27%	x12/a2	4,38%	x11/a1	4,42%	8		
	x12/a2	4,20%	x12/a2	3,72%	x11/a1	4,20%	x11/a1	4,26%	x9/s1	4,59%	x11/a1	4,22%	x13/a3	4,31%	9		
	x1/ra	3,54%	x1/ra	3,26%	x9/s1	3,74%	x9/s1	3,24%	x12/a2	3,22%	x1/ra	3,13%	x9/s1	3,83%	10		
	x9/s1	3,21%	x9/s1	2,84%	x12/a2	3,71%	x1/ra	3,24%	x18/s2	3,09%	x9/s1	3,08%	x12/a2	3,66%	11		
	x18/s2	2,23%	x18/s2	2,03%	x18/s2	2,61%	x18/s2	2,34%	x13/a3	2,94%	x18/s2	2,32%	x18/s2	2,66%	12		
	x19/s3	1,99%	x19/s3	1,72%	x19/s3	2,06%	x19/s3	2,06%	x19/s3	2,23%	x19/s3	2,05%	x19/s3	2,08%	13		
	x20/s4	1,52%	x20/s4	1,22%	x20/s4	1,54%	x20/s4	1,47%	x20/s4	1,62%	x20/s4	1,53%	x20/s4	1,54%	14		
	x21/s5	1,42%	x21/s5	1,18%	x21/s5	1,27%	x21/s5	1,46%	x21/s5	1,22%	x21/s5	1,48%	x21/s5	1,27%	15		
	x16/a6	1,40%	x16/a6	1,13%	x22/s6	1,10%	x16/a6	1,36%	x22/s6	0,90%	x16/a6	1,39%	x22/s6	1,06%	16		
	x22/s6	1,21%	x23/s7	1,01%	x23/s7	0,98%	x23/s7	1,25%	x23/s7	0,85%	x26/s10	1,22%	x23/s7	0,97%	17		
	x25/s9	1,20%	x22/s6	0,97%	x24/s8	0,85%	x26/s10	1,22%	x6/t1	0,83%	x17/a7	1,22%	x24/s8	0,84%	18		
	x26/s10	1,15%	x26/s10	0,96%	x25/s9	0,80%	x22/s6	1,19%	x24/s8	0,74%	x22/s6	1,22%	x25/s9	0,81%	19		
	x23/s7	1,15%	x17/a7	0,95%	x26/s10	0,74%	x17/a7	1,18%	x25/s9	0,68%	x23/s7	1,17%	x26/s10	0,75%	20		
	x17/a7	1,15%	x25/s9	0,94%	x27/s11	0,70%	x25/s9	1,15%	x16/a6	0,64%	x27/s11	1,10%	x27/s11	0,70%	21		
	x24/s8	1,00%	x27/s11	0,86%	x16/a6	0,53%	x27/s11	1,07%	x26/s10	0,55%	x25/s9	1,09%	x16/a6	0,65%	22		
	x27/s11	0,94%	x24/s8	0,84%	x17/a7	0,34%	x24/s8	1,02%	x27/s11	0,51%	x24/s8	1,02%	x6/t1	0,49%	23		
	x6/t1	0,72%	x6/t1	0,62%	x6/t1	0,34%	x6/t1	0,77%	x17/a7	0,42%	x6/t1	0,80%	x17/a7	0,46%	24		
	x3/gp	0,61%	x28/t3	0,44%	x28/t3	0,14%	x28/t3	0,57%	x3/gp	0,34%	x28/t3	0,59%	x3/gp	0,21%	25		
	x28/t3	0,52%	x29/t4	0,29%	x3/gp	0,13%	x3/gp	0,54%	x28/t3	0,18%	x3/gp	0,56%	x28/t3	0,20%	26		
	x29/t4	0,32%	x4/tp	0,21%	x29/t4	0,11%	x29/t4	0,37%	x29/t4	0,13%	x29/t4	0,42%	x29/t4	0,15%	27		
	x30/t5	0,23%	x30/t5	0,20%	x30/t5	0,08%	x30/t5	0,26%	x30/t5	0,08%	x30/t5	0,27%	x30/t5	0,10%	28		
	x4/tp	0,23%	x31/t6	0,18%	x31/t6	0,07%	x4/tp	0,23%	x31/t6	0,06%	x31/t6	0,24%	x31/t6	0,09%	29		
	x31/t6	0,22%	x5/t0	0,13%	x5/t0	0,05%	x31/t6	0,23%	x4/tp	0,05%	x4/tp	0,21%	x5/t0	0,06%	30		
	x7/t2	0,13%	x7/t2	0,09%	x7/t2	0,04%	x5/t0	0,16%	x5/t0	0,04%	x5/t0	0,17%	x7/t2	0,05%	31		
	x5/t0	0,12%	x3/gp	0,00%	x4/tp	0,01%	x7/t2	0,12%	x7/t2	0,04%	x7/t2	0,16%	x4/tp	0,05%	32		
Ranked hitlist		Dynamic												Ranked hitlist	Average		
Access frequency		sort		gzip**	602.gcc_s*		605.mcf_s*		620.omnetpp_s*		631.deepsjeng_s*		Average	Access frequency	Dynamic Hits		
1	x15/a5	40,92%	x15/a5	57,77%	x15/a5	20,03%	x15/a5	15,38%	x15/a5	15,21%	x15/a5	22,02%	x15/a5	35,17%	1	83,59%	mapped
	x8/s0/fp	21,43%	x14/a4	19,35%	x14/a4	10,44%	x14/a4	10,11%	x2/sp	11,63%	x14/a4	14,97%	x14/a4	15,46%	2		
	x14/a4	20,04%	x8/s0/fp	5,53%	x2/sp	10,41%	x0/zero	9,11%	x10/a0	10,19%	x10/a0	10,22%	x13/a3	5,78%	3		
	x13/a3	7,59%	x13/a3	4,42%	x0/zero	7,88%	x10/a0	6,73%	x14/a4	9,71%	x13/a3	8,36%	x10/a0	5,70%	4		
	x2/sp	2,73%	x0/zero	3,07%	x13/a3	7,01%	x17/a7	6,67%	x0/zero	8,17%	x2/sp	5,59%	x0/zero	5,22%	5		
	x0/zero	1,90%	x9/s1	2,56%	x10/a0	6,55%	x8/s0/fp	6,53%	x13/a3	5,87%	x0/zero	5,03%	x8/s0/fp	4,77%	6		
	x1/ra	1,31%	x2/sp	2,51%	x8/s0/fp	4,89%	x13/a3	4,36%	x8/s0/fp	5,45%	x12/a2	4,19%	x2/sp	4,11%	7		
	x10/a0	0,99%	x18/s2	1,05%	x12/a2	4,41%	x11/a1	4,33%	x1/ra	5,25%	x11/a1	3,24%	x12/a2	2,73%	8		
	x12/a2	0,98%	x1/ra	0,89%	x1/ra	3,85%	x6/t1	3,99%	x11/a1	5,13%	x1/ra	2,83%	x11/a1	2,39%	9		
	x11/a1	0,78%	x10/a0	0,87%	x11/a1	3,78%	x12/a2	3,97%	x12/a2	4,15%	x8/s0/fp	2,53%	x9/s1	2,31%	10		
	x9/s1	0,21%	x12/a2	0,79%	x9/s1	3,42%	x27/s11	3,81%	x9/s1	3,66%	x9/s1	1,84%	x1/ra	2,24%	11		
	x16/a6	0,14%	x21/s5	0,36%	x18/s2	2,66%	x1/ra	2,81%	x18/s2	2,44%	x18/s2	1,74%	x17/a7	1,55%	12		
	x18/s2	0,11%	x11/a1	0,33%	x16/a6	2,41%	x31/t6	2,73%	x19/s3	1,91%	x20/s4	1,64%	x18/s2	1,39%	13		
	x19/s3	0,11%	x20/s4	0,25%	x19/s3	2,36%	x5/t0	2,54%	x16/a6	1,57%	x27/s11	1,64%	x27/s11	1,21%	14		
	x26/s10	0,09%	x19/s3	0,24%	x20/s4	1,68%	x21/s5	2,02%	x17/a7	1,18%	x19/s3	1,53%	x19/s3	1,06%	15		
	x25/s9	0,08%	x16/a6	0,02%	x21/s5	1,22%	x9/s1	1,85%	x20/s4	1,15%	x16/a6	1,36%	x6/t1	1,03%	16		
	x20/s4	0,08%	x17/a7	0,00%	x22/s6	1,13%	x19/s3	1,70%	x21/s5	1,07%	x21/s5	1,20%	x21/s5	0,98%	17		
	x27/s11	0,07%	x4/tp	0,00%	x17/a7	1,07%	x28/t3	1,46%	x22/s6	0,87%	x22/s6	1,16%	x20/s4	0,98%	18		
	x17/a7	0,06%	x25/s9	0,00%	x23/s7	0,87%	x20/s4	1,43%	x29/t4	0,71%	x24/s8	1,14%	x16/a6	0,67%	19		
	x24/s8	0,06%	x23/s7	0,00%	x25/s9	0,79%	x26/s10	1,21%	x6/t1	0,70%	x28/t3	0,99%	x31/t6	0,63%	20		
	x22/s6	0,05%	x22/s6	0,00%	x26/s10	0,69%	x2/sp	1,20%	x25/s9	0,62%	x17/a7	0,89%	x28/t3	0,61%	21		
	x6/t1	0,05%	x24/s8	0,00%	x24/s8	0,58%	x25/s9	1,08%	x23/s7	0,56%	x3/gp	0,88%	x22/s6	0,57%	22		
	x28/t3	0,05%	x26/s10	0,00%	x27/s11	0,49%	x18/s2	1,02%	x28/t3	0,51%	x6/t1	0,87%	x5/t0	0,54%	23		
	x21/s5	0,05%	x27/s11	0,00%	x6/t1	0,33%	x29/t4	0,82%	x24/s8	0,48%	x26/s10	0,81%	x26/s10	0,49%	24		
	x23/s7	0,03%	x6/t1	0,00%	x28/t3	0,19%	x30/t5	0,79%	x3/gp	0,44%	x29/t4	0,79%	x24/s8	0,48%	25		
	x29/t4	0,03%	x28/t3	0,00%	x3/gp	0,19%	x22/s6	0,69%	x27/s11	0,34%	x25/s9	0,70%	x25/s9	0,47%	26		
	x31/t6	0,02%	x29/t4	0,00%	x5/t0	0,18%	x23/s7	0,65%	x26/s10	0,28%	x23/s7	0,67%	x29/t4	0,46%	27		
	x30/t5	0,02%	x30/t5	0,00%	x31/t6	0,16%	x16/a6	0,52%	x4/tp	0,25%	x31/t6	0,42%	x23/s7	0,38%	28		
	x7/t2	0,01%	x7/t2	0,00%	x29/t4	0,13%	x24/s8	0,46%	x30/t5	0,22%	x30/t5	0,33%	x3/gp	0,32%	29		
	x3/gp	0,01%	x5/t0	0,00%	x7/t2	0,07%	x7/t2	0,03%	x31/t6	0,22%	x5/t0	0,29%	x30/t5	0,26%	30		
	x5/t0	0,01%	x31/t6	0,00%	x4/tp	0,06%	x3/gp	0,00%	x7/t2	0,03%	x7/t2	0,14%	x7/t2	0,05%	31		
	x4/tp	0,00%	x3/gp	0,00%	x30/t5	0,06%	x4/tp	0,00%	x5/t0	0,02%	x4/tp	0,00%	x4/tp	0,02%	32		