

New issue

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[Bug Report] Out of bound array access #884

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chenc6 opened this issue on May 24 · 0 comments

chenc6 commented on May 24

Hi,

CVA6 RTL is returning unknown value ("xxxxxxx") when reading the value of MHPMCOUNTER30. This is happening because the csr reg data (csr_rdata) is being read from perf_counter_d array in the perf_counters.sv module with an array index outside its range. The range of perf_counter_d is [riscv::CSR_MIF_EMPTY : riscv::CSR_ML1_ICACHE_MISS] (line:46 from perf_counter.sv file), but in line: 282 of csv_regfile.sv we are using the array to access array index riscv::CSR_MHPM_COUNTER_30, which is greater than the range of [riscv::CSR_MIF_EMPTY : riscv::CSR_ML1_ICACHE_MISS].

Please find attached the triggering input mem file, spike_trace_log, and cva6_trace_log. We can see from the line:83 of cva6 trace log that the read data is xxxxxxxx

83	22810ns	1133	M	00000000800025c0	0	b1e02973	csrr	s2, b1e	s2
								:xxxxxxxxxxxxxxxx	
84	22870ns	1136	M	00000000800025c4	0	00a000a3	sb	a0, 1(x0)	a0
								:0000000000000000 VA: 0000000000000001 PA: 0000000000000001	
85	22890ns	1137	M	00000000800025c8	0	180700a3	sb	x0, 385(a4)	a4
								:0000000000000000 VA: 0000000000000181 PA: 0000000000000181	

[outofrange.zip](#)

Assignees

No one assigned

Labels

None yet

Projects

None yet

Milestone

No milestone

Development

No branches or pull requests

1 participant

