

HEVM

EVM
Byte
Code

Symbolic Executor

Generates symbolic expression
from EVM bytecode & starting
state

Array Simplifier

Does array-specific
simplifications to make storage
easier to reason about

Expression Simplifier

Keccak Constraint Generator

Generates Keccak constraints to
reason relatively precisely about
SHA3

SMT generator & solver runner

Translates Expr to SMT queries and runs
them on an SMT solver

Counterexample Extractor

Creates EVM calls from the solution found
by the SMT solver to trigger the assertion
violation

Function call to
trigger violation

