Handling intersecting paths: We define merge points which are used to create conflict sets.

Handling loops in CFGs: Loop transformation to convert cyclic CFG to acyclic CFG.

Handling path enumeration: Approximations are used to reduce the number of conflict sets generated.

Conflict set, \( C = \{ \text{Blue edges} \} \cup \{ \text{Red edges} \} \).

Instrumenting any \( e \in C \) can distinguish between red and blue path.

Conflict sets are created for the entire program.

The minimum hitting set of the conflict sets is the set of instrumentation points.

Experimental Results

- Instruments 9% of total edges on average
- Incurs 97% runtime overhead on average
  - Any optimal instrumentation approach incurs at least 71% overhead
  - State of the art incurs 278% overhead