

BF Vulnerability Specification Model

Weakness Type ₁

Weakness ₁

Defect Type

Bug
(improper operation)

Operand₁₁ Kind

Value_{11s}

...

Operand₁₁ State

Value_{11k}

Operand₁₅ Kind

Value_{15s}

Operand₁₅ State

Value_{15k}

Operation₁

Mechanism

Value_{1m}

Error Type ₁

Error₁

Source Code

Value_{1c}

Execution Space

Value_{1e}

Weakness Type ₂

Weakness ₂

Fault Type ₁

Fault₁
(improper operand₁)

Operand₂₁ Kind

Value_{21s}

...

Operand₂₁ State

Value_{21k}

Operand₂₅ Kind

Value_{25s}

Operand₂₅ State

Value_{25k}

Operation₂

Mechanism

Value_{2m}

Error Type ₂

Error₂

Source Code

Value_{2c}

Execution Space

Value_{2e}

Weakness Type _N

Weakness _N

Fault Type _{N-1}

Fault_{N-1}
(improper operand_{N-1})

Operand_{N1} Kind

Value_{N1s}

...

Operand_{N1} State

Value_{N1k}

Operand_{N5} Kind

Value_{N5s}

Operand_{N5} State

Value_{N5k}

Operation_N

Mechanism

Value_{Nm}

Exploitable Error Type

Exploitable Error

Source Code

Value_{Nc}

Execution Space

Value_{Ne}



Bug



Operation



Fault / Error



Exploitable Error



Failure

→ Causation within a weakness

↪ Causation between weaknesses

Failure Type

Failure₁

Failure Type

Failure_F