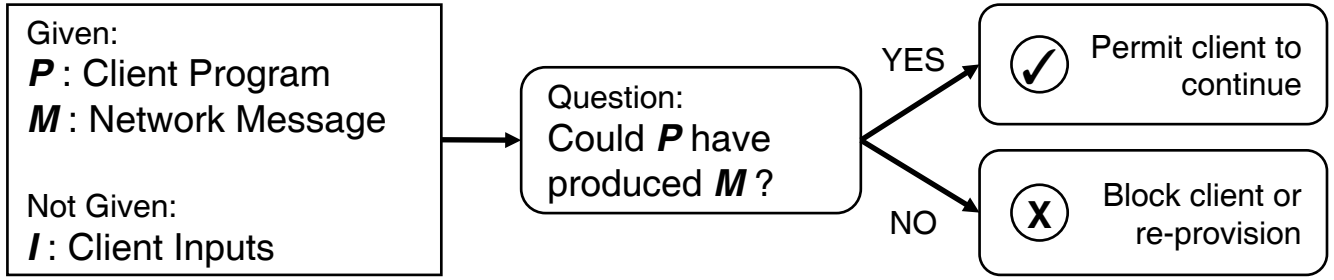
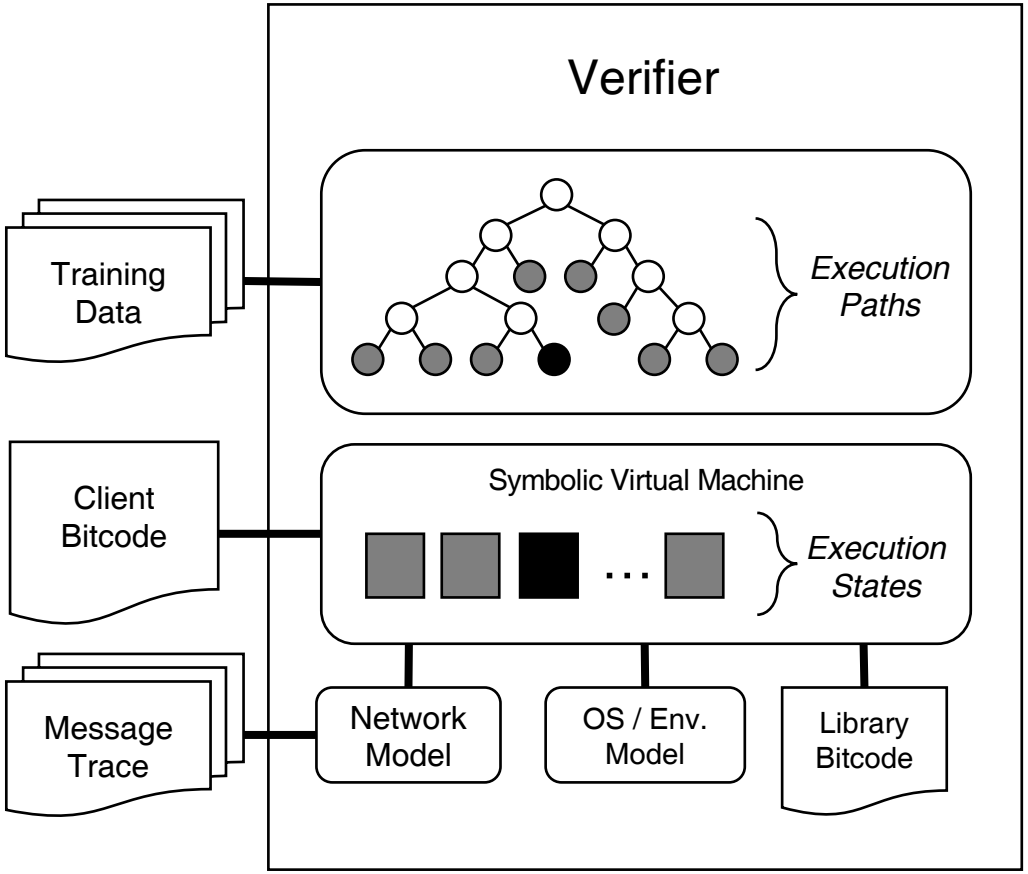
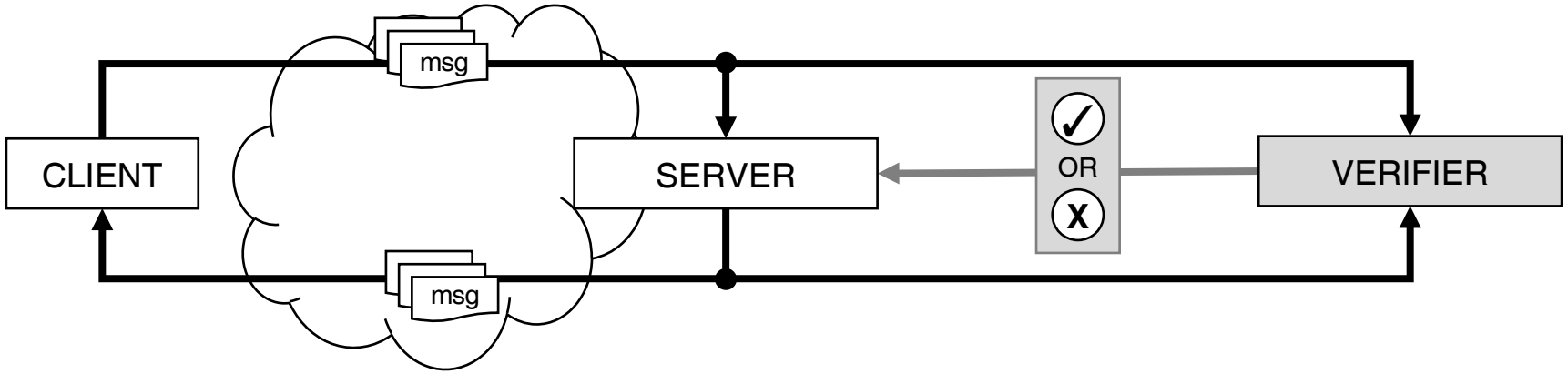
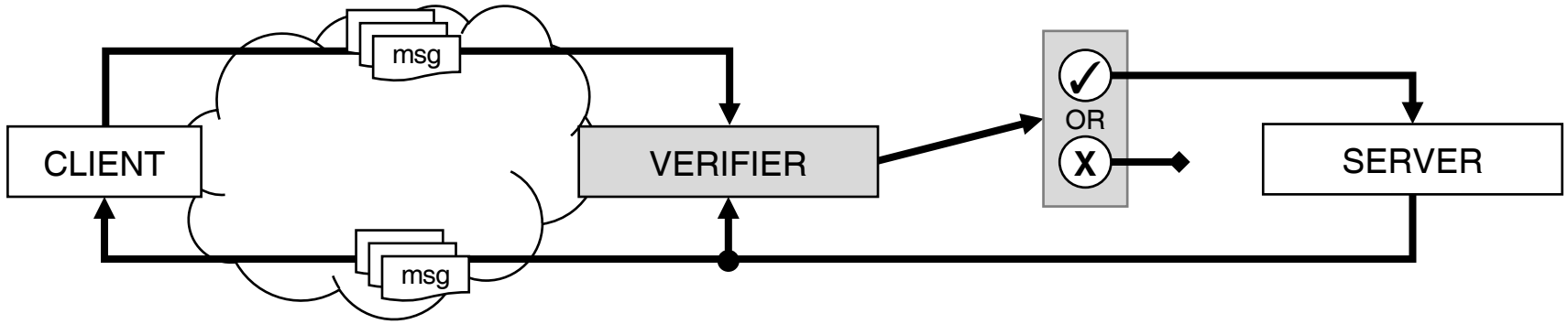
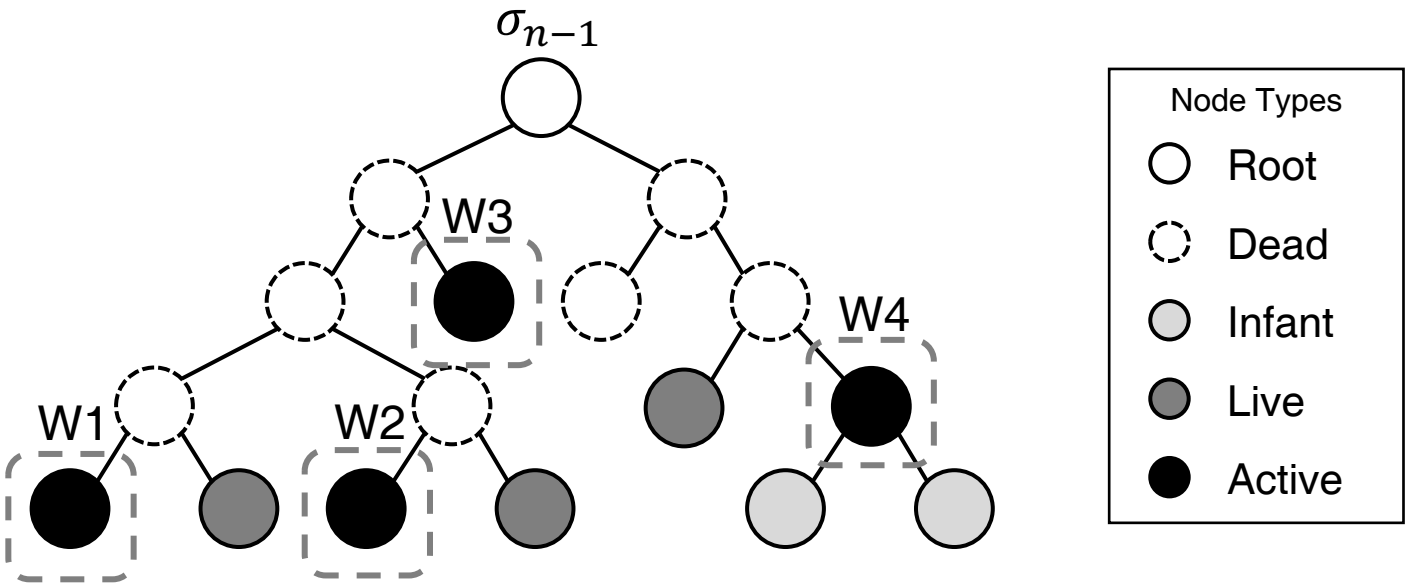
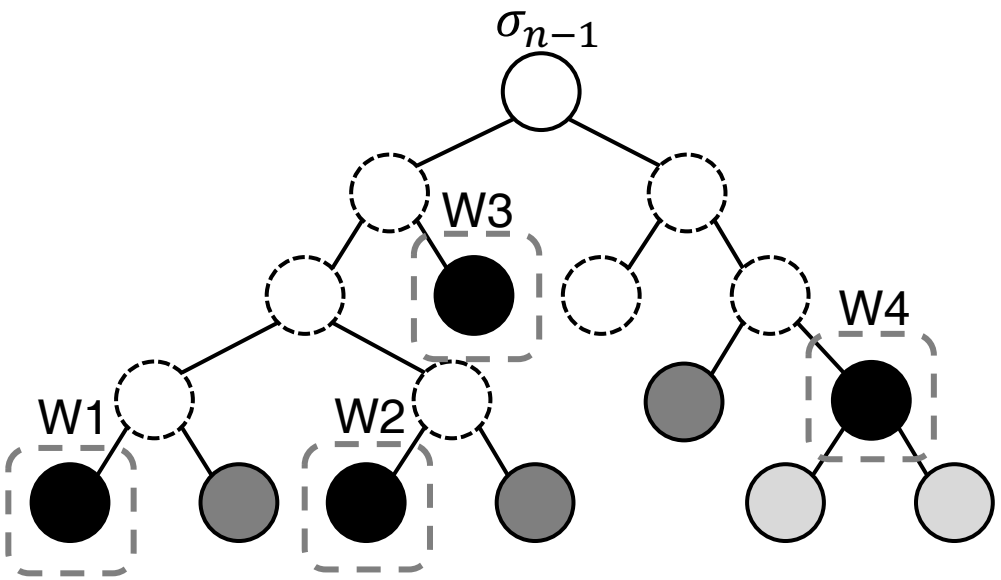

Given:
P : Client Program
M : Network Message
Not Given:
I : Client Inputs
Question:
Could P have produced M ?
YES
NO
Permit client to continue
Block client or re-provision

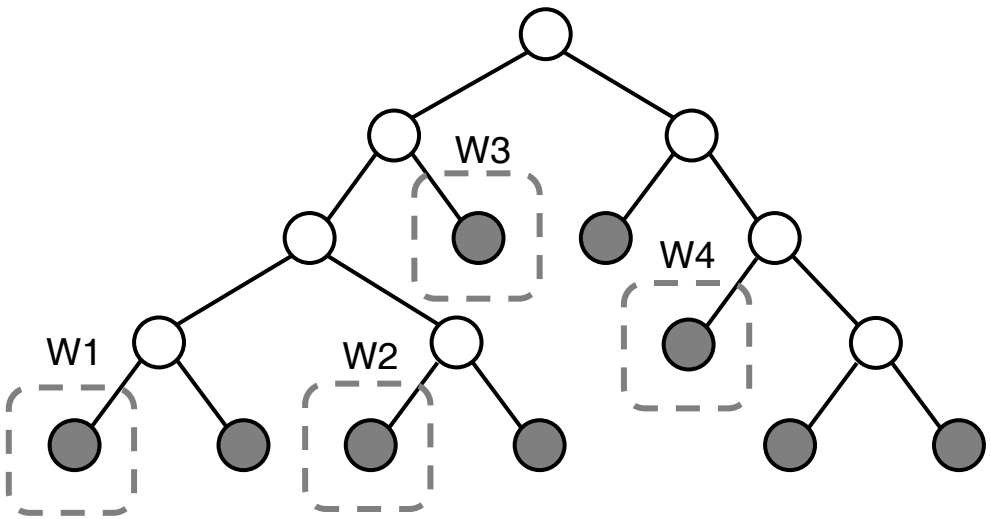

Verifier
Training Data
Execution Paths
Client Bitcode
Symbolic Virtual Machine
Execution States
Message Trace
Network Model
OS / Env. Model
Library Bitcode

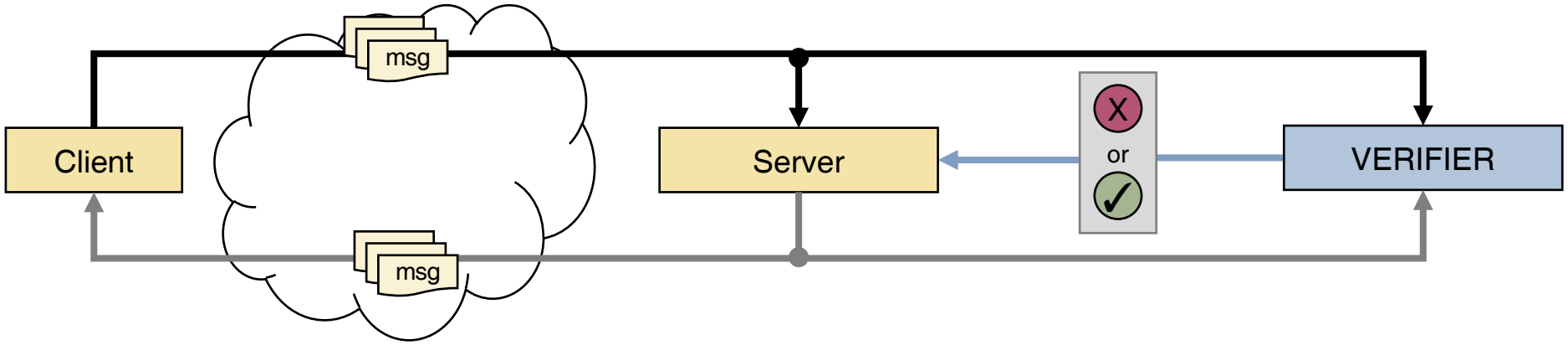

msg
CLIENT
SERVER
OR
VERIFIER
msg

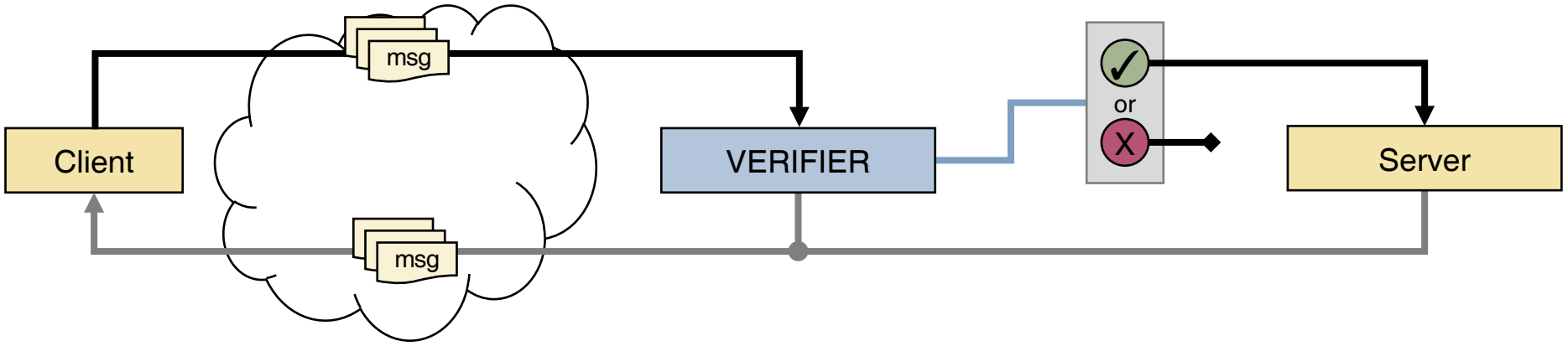

msg
CLIENT
VERIFIER
OR
SERVER
msg

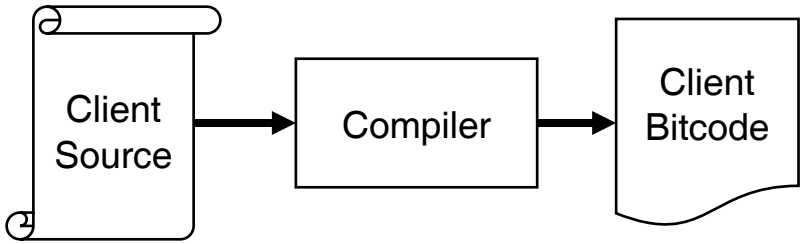

σ_{n-1}
W1
W2
W3
W4
Node Types
Root
Dead
Infant
Live
Active

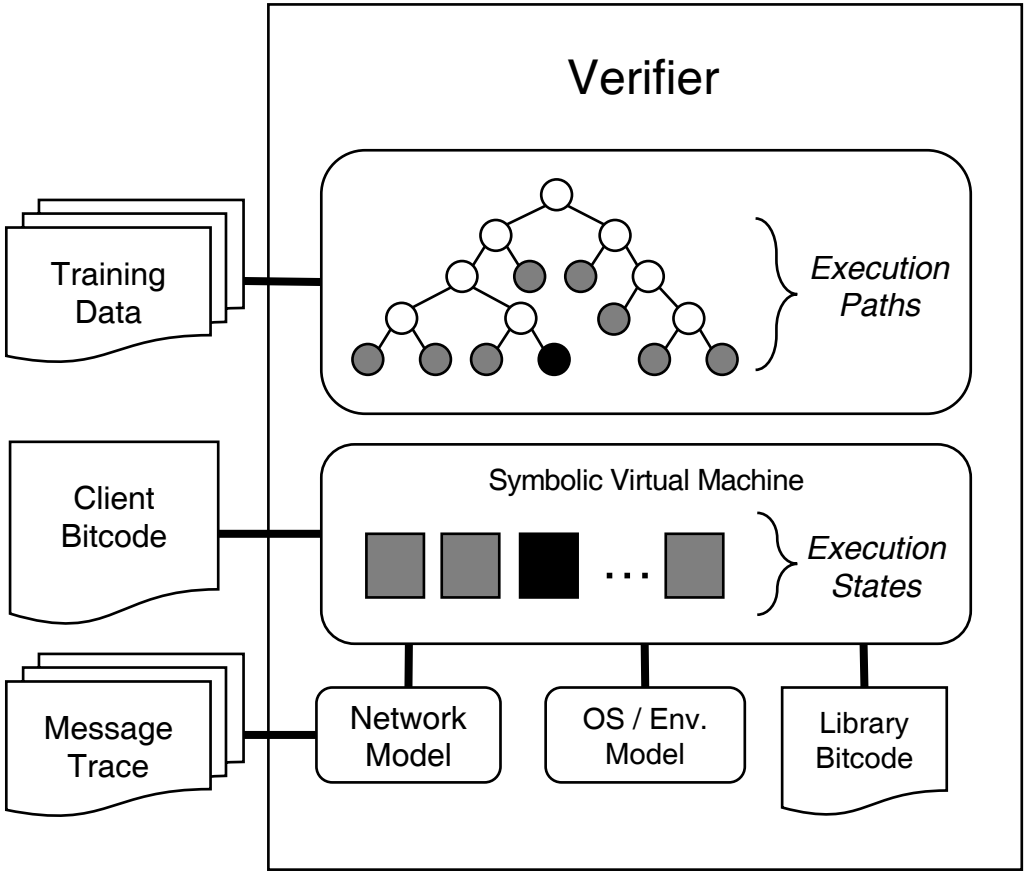

σ_{n-1}
W3
W4
W1
W2


W3
W4
W1
W2


msg
Client
Server
X
or
VERIFIER
msg


msg
Client
VERIFIER
or
X
Server
msg


Client
Source
Compiler
Client
Bitcode


Verifier
Training Data
Execution Paths
Client Bitcode
Symbolic Virtual Machine
Execution States
Message Trace
Network Model
OS / Env. Model
Library Bitcode