

MaxOneOpen - Runtime Execution Model

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FOUNDATION – Execution Model Scope

This document defines the execution logic that governs MaxOneOpen twins during runtime. It formalizes how twins are loaded, verified, executed, synchronized, and terminated in a distributed edge environment – based on structural manifest control and zero-trust logic.

EXECUTION – Runtime Execution Stages

Stage	Input	System Behavior
1. Bootstrap	Manifest + signature	Validation, config allocation, sandbox init
2. Launch	entry_file + resources	Execution of runtime environment (e.g. container, process)
3. Monitor	twin-log + peer discovery	Health check, logging, mesh event signaling
4. React	external trigger or data	Twin reacts via runtime logic, invokes modules
5. Sync	peer state + ZKP channel	Replication check, state integrity, fork merge
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6. Terminate	exit condition met	Twin shutdown, resource release, log archive