Enterprise Trial Architecture v1.0

Cyber-Physics Enterprise Trial Edition

Technical Architecture Overview

Version: 1.0

Classification: Evaluation Documentation

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1. Purpose

This document describes the architecture of the Cyber-Physics Enterprise Trial Edition and its deployment model within enterprise environments.

The objective of the trial architecture is to demonstrate deterministic operational governance as a complementary layer operating alongside existing cybersecurity ecosystems.

2. Architectural Philosophy

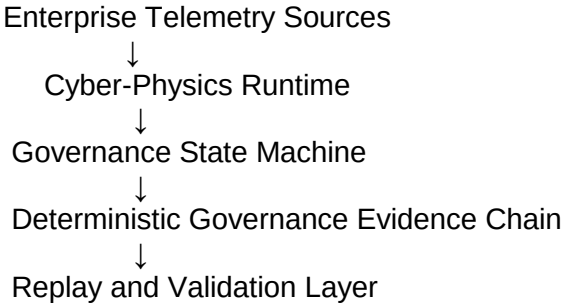
Cyber-Physics is not designed to replace existing security platforms.

The architecture assumes the presence of existing technologies including:

- SIEM
- XDR
- EDR
- NDR
- SOAR
- Telemetry Platforms

Cyber-Physics operates as an independent governance layer that consumes operational signals and produces deterministic governance outputs.

3. High-Level Architecture



4. Runtime Components

Governance State Machine

Runtime governance operates through deterministic state transitions:

OBSERVE → ALERT → GOVERNANCE → STABILIZED

All transitions are explicitly recorded.

DGEC

The Deterministic Governance Evidence Chain provides:

- Governance traceability
- State transition evidence
- Hash-chain verification
- Operational accountability

Replay Layer

Replay functionality enables:

- Governance reconstruction
- Event replay
- Operational verification
- Post-evaluation analysis

5. Deployment Architecture

Cyber-Physics is distributed as:

- OCI Runtime Image
- Helm Deployment Package
- Kubernetes Assets
- Documentation Package

6. Containerization Model

The runtime is isolated within its own container boundary.

Characteristics:

- Non-root execution
- Runtime isolation
- Independent governance lifecycle
- Independent evidence management

7. Kubernetes Integration

The trial edition targets Kubernetes-based environments.

Included assets:

- Deployment Templates
- Network Policies
- Helm Charts
- Runtime Configuration Assets

8. Security Architecture

Security principles include:

- Container isolation
- Restricted privileges
- Capability reduction
- Runtime hardening
- Independent evidence preservation

9. Evaluation Objectives

The trial architecture is intended to evaluate:

- Runtime deployment
- Governance execution
- Operational resilience
- Evidence continuity
- Enterprise compatibility

10. Architectural Outcome

The Enterprise Trial Edition is intended to demonstrate that deterministic operational governance can operate as a complementary architectural layer within modern cybersecurity infrastructures.