

Operational Stability Validation Plan v1.0

Cyber-Physics Enterprise Trial Edition

Operational Validation Strategy

Version: 1.0

Classification: Evaluation Documentation

1. Purpose

The purpose of this document is to define the operational stability validation strategy for the Cyber-Physics Enterprise Trial Edition.

The primary objective is to evaluate runtime continuity, resilience, and governance integrity under sustained operation.

2. Validation Philosophy

The trial does not primarily seek to validate cybersecurity detection performance.

Instead, it focuses on validating:

- Runtime survivability
- Governance continuity
- Evidence integrity
- Recovery capability
- Enterprise deployment readiness

3. Validation Objectives

The runtime shall demonstrate:

- Stable startup behavior
- Stable restart behavior
- Predictable resource consumption
- Governance persistence
- Operational continuity

4. Validation Phases

Phase 1

Deployment Validation

Verify:

- OCI Runtime deployment
- Helm deployment
- Kubernetes startup

Phase 2

Operational Validation

Verify:

- Runtime execution
- Governance transitions
- DGEC integrity

Phase 3

Endurance Validation

Verify:

- Long-duration operation
- Resource stability
- Recovery behavior

5. Operational Metrics

The following metrics shall be monitored:

- Runtime Availability
- CPU Utilization
- Memory Utilization
- Restart Frequency
- DGEC Integrity
- Governance Continuity

6. Recovery Validation

The runtime shall be evaluated under:

- Planned restart scenarios
- Unexpected termination scenarios
- Kubernetes pod recreation scenarios

7. Success Criteria

The validation program shall be considered successful when:

- Runtime remains operational.
- Governance continuity is preserved.
- DGEC integrity remains verifiable.
- Recovery operations complete successfully.
- No critical runtime failures occur.

8. Trial Objective

The objective of the validation program is to establish confidence in the operational characteristics of the Cyber-Physics runtime prior to any future production-oriented discussions.

9. Current Status

Current state:

- OCI Runtime Packaging Complete
- GHCR Distribution Complete
- Helm Packaging Complete
- Deployment Assets Complete

Next stage:

Operational Validation and Endurance Testing

10. Final Goal

To demonstrate deterministic operational continuity under enterprise deployment conditions and establish the technical readiness of the Cyber-Physics Enterprise Trial Edition.