

Composite Fleet Health Assessment

by [Nick Clark](#) | Published April 25, 2026

What It Specifies

Per-unit health observations compose into fleet-level analysis. The architecture admits the per-unit observations; the fleet analysis identifies cross-unit patterns; the resulting composite assessments enter as credentialed events.

Composite events carry: contributing per-unit observations, analysis primitives, identified patterns, monitoring authority signature. Downstream operations admit the events against admissibility.

Why It Matters Structurally

Per-unit health monitoring without composition faces structural blindness to systemic issues. Real fleet issues often manifest as cross-unit patterns; the architecture must compose structurally.

Composite assessment produces structural support. The architecture surfaces systemic patterns; fleet operators can address underlying causes; the patterns are auditable.

How It Composes With Mesh Operation

The architecture defines the composition primitives, the pattern-identification algorithms, and the event recording. Implementations apply the architecture; monitoring operations proceed within the framework.

Composition composes with other features. Cross-fleet composition federation, byzantine-robust composition under disputed observations, and dispute mechanism for composition disputes all build on the composition primitive.

What This Enables

Defense fleet operators gain structurally-supported composite assessment. Civilian critical-infrastructure fleet operators gain the same.

The architecture also supports assessment evolution. As fleet-pattern recognition matures, assessment algorithms update through governance procedures.