

# Cascade Halting Mechanisms

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## What It Specifies

Cascade halting carries: identified cascade frontier, isolation-action authorities, isolation-action targets, restoration-coordination targets. Each action enters lineage; the resulting cascade-state recording supports operational analysis.

Halt operations are governance-credentialed. The halting authority, the actions, and the outcomes all enter lineage; downstream audit verifies halt decisions structurally.

## Why It Matters Structurally

Cascade response without structural halting produces uncontrolled propagation. Real cascades require structural containment to limit damage; the architecture must support the containment.

Cascade halting produces structural containment. The architecture admits halt operations; the operations target credentialed elements; restoration follows under coordinated authority.

## How It Composes With Mesh Operation

The architecture defines the halt-operation protocol, the cascade-frontier identification primitives, and the restoration-coordination handling. Implementations apply the architecture; halting operations proceed within the framework.

Halting composes with other features. Cross-jurisdictional cascade halting, byzantine-robust halt operations under disputed conditions, and dispute mechanism for halt decisions all build on the halting primitive.

## **What This Enables**

Defense mesh resilience under active cascade scenarios gains structurally-supported halting. Civilian critical-infrastructure resilience gains the same.

The architecture also supports halting evolution. As cascade patterns are characterized through operational experience, halting protocols update through governance procedures.