

Corruption Propagation Window

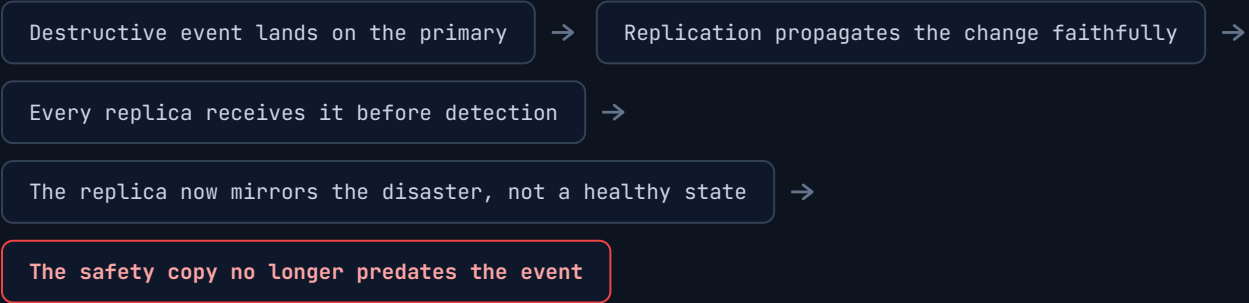
DEFINITION

The interval during which replication faithfully propagates corruption or ransomware to all copies before detection.

FRAMEWORK FLOW

01 The Condition Replication has no concept of intent — a legitimate write and a ransomware encryption event are both just changes to propagate.	02 The Boundary The interval between a destructive event landing on the primary and that same event reaching every replica, before anyone detects it.	03 Failure State Synchronous replication shrinks that interval toward zero — the more aggressive the replication, the faster the disaster reaches the safety copy.	04 Consequence The replica is proven to be a mirror, not a recovery point — it reflects ransomware as cleanly as a healthy transaction.
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Failure State: The Mirror Reflects the Disaster



THE DIAGNOSTIC SIGNAL

PROPAGATION-VS-DETECTION RACE Whether the propagation interval is shorter than the time it takes to detect the destructive event.	AGGRESSIVENESS TRADE-OFF Lower-lag replication shrinks the window — and shortens the time available to catch corruption before it spreads.
TRIGGER CONDITION Any destructive write — ransomware, a bad migration, an accidental drop — activates the window; replication cannot tell it apart from a legitimate one.	REMEDICATION SHAPE Breaking the propagation path — air gaps, immutability, versioned point-in-time copies — not tightening replication further.

ARCHITECTURAL RELATIONSHIPS

#99 The Replication–Recovery Gap RELATEDMODERATE The Replication-Recovery Gap is the structural condition; Corruption Propagation Window is its time-bound failure mode.	#101 Dependency Recovery Blindness RELATEDMODERATE Co-resident in the Cross-Region Replication post as paired failure-window / blindness conditions.
#102 Recovery State RELATEDMODERATE Co-resident in the Cross-Region Replication post — corruption propagation is a threat to reaching Recovery State.	

ANCHOR /cross-region-replication-resilience/

FRAMEWORK HOME

The interval between a destructive event reaching the primary and that same event being faithfully copied to every replica, before anyone detects it.

"The replica is not a recovery point. It is a mirror, and a mirror reflects ransomware as cleanly as it reflects a healthy transaction."