Multi-Attester Consensus Timestamping

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What Multi-Attester Consensus Timestamping Specifies

Each attester independently produces a timestamp under its credentialed time identity. The consensus timestamp combines the attester observations under declared weighting; the resulting timestamp carries the attester set as lineage.

Downstream consumers of the timestamp can evaluate the attester set's credibility, the consensus quality, and the agreement pattern. The timestamp is a structured claim rather than an opaque value.

Why It Matters Structurally

Single-attester timestamping produces a single point of compromise. A compromised timestamper can backdate events, alter ordering, or otherwise undermine downstream audit.

Multi-attester consensus produces structural defense. A successful attack would require simultaneous compromise of multiple credentialed attesters; the attacker's burden is structural rather than implementation-dependent.

How It Composes With Mesh Operation

The architecture admits timestamp requests against operational events. Eligible attesters within the credentialed set contribute their observations; the consensus solver produces the agreement timestamp; the resulting record enters lineage.

Disagreement among attesters surfaces as a credentialed diagnostic event. Sustained disagreement may indicate clock failure, attempted manipulation, or genuine uncertainty about event ordering.

What This Enables for Resilient Timekeeping

Regulatory audit (financial transactions, regulatory submissions, evidentiary timestamps) gains timestamp authority that survives single-attester compromise.

Defense engagement-decision audit gains the same. Engagement decisions carry multi-attester timestamps; post-incident review can verify the timestamp authority structurally.