

Full text and failure taxonomy - Incident-Arena

PRIMARY

Publisher	arXiv
Published	2026-09-30
Retrieved	2026-10-03
Cite key	arxiv2026full
URL	https://arxiv.org/html/2610.00648

Assessment. The paper's own HTML rendering, used because the abs page was rate-limited after the first read. Every body figure in this edition comes from here. The three substrate names reported by the extraction pass could not be reconciled with the abstract's 'open source software' for one of the three, so no substrate is named anywhere in the edition.

Claims drawn from this source. CLAIM-2026-10-03-03, CLAIM-2026-10-03-04, CLAIM-2026-10-03-05, CLAIM-2026-10-03-06, CLAIM-2026-10-03-07, CLAIM-2026-10-03-12

Scale

Ten agent configurations, twenty tasks, 150 trials per task: "across 20 tasks this produces 3,000 model trials".

The conditional that carries the story

Of 2,967 episodes with usable action records, 1,638 (55%) issued a full fix implementing all reference-solution actions. "Of the episodes that implement a full fix, only 59% (966 of 1,638) pass."

Where the remaining 672 went

340 failed only the outcome gate - premature declaration. 329 failed safety checks, "primarily from agents undoing their own fixes by moving the maintenance window to a second that was still unsafe (145) or raising the connection pool past its ceiling after it had been fixed (38)".

Durability and scope

"In 782 failures the change held at declaration, but could not persist through a restart, or past the next trigger." In 448 failures agents "changed a setting the task did not permit", with "261 touched a different subsystem from the fault".

The reasoning dial

Across eight models with five reasoning settings: "From the lowest setting to the highest, pass@1 gains 4.6 points", with negligible differential gains on complex versus simple tasks. The authors' conclusion: "Deliberation does not touch the failure" of premature stopping.

The two gates

Outcome gate: service-level indicators - goodput, latency, error rates - under continued traffic. Safety gate: restart durability of affected services, re-occurrence of the fault trigger, scope compliance, and data/guardrail integrity. Both must pass. Grading is deterministic and LLM-free.

Limitation carried into the edition as a hedge

Thirteen of the twenty tasks sit on a single application substrate.