

064: Mission Manifest & Output Artifact Verification Trace

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Status: Draft (Discovery Notes)

1. Mission Manifest Creation

mission.json is created by the agent during harness planning or via helper scripts such as *scripts/create_mission.py*. In harness planning mode, the agent is explicitly instructed to include *output_artifacts* in each task definition.

2. Mission Updates (Interview Flow)

If the interview tool is used, answers are merged into *mission.json* while status remains *PLANNING*. After approval, status moves to *IN_PROGRESS*.

3. Verification Pipeline (Harness)

When the agent outputs a completion promise, the harness verifies **all COMPLETED tasks with output_artifacts**.

Verifier tiers:

- Tier 1: Binary existence (file must exist)
- Tier 2: Format validation (non-empty, valid JSON/HTML/PDF)
- Tier 3: Optional semantic LLM check (async)

If verification fails, tasks are marked *RETRY* in *mission.json*.

4. Output Artifacts Expectations

output_artifacts are **file-based**. This means success is currently proven by files, not ledger receipts. If a task declares *email_sent_confirmation*, that file must exist—even if Gmail already returned a message ID.

This explains the harness restart behavior observed in prior runs when an email confirmation artifact was missing.

5. Related Scripts & Files

- *scripts/create_mission.py* — simple manifest generator

- *harness/verifier.py* — TaskVerifier implementation
- *main.py* — harness verification and retry logic

6. Open Notes

- Tool receipts capture external IDs (e.g., Gmail message id), but the verifier does not yet consume them.
- A future enhancement could map *email_sent_confirmation* to ledger evidence, but this is not implemented yet.