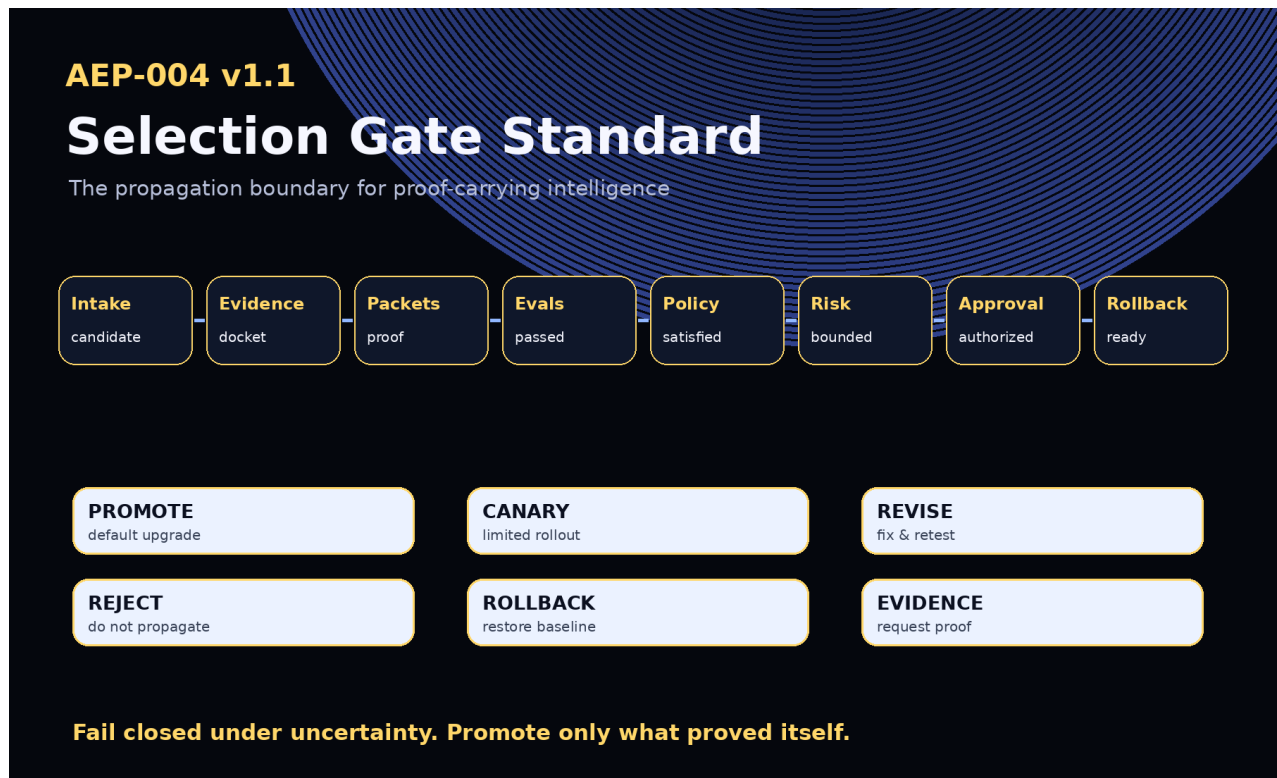


# AEP-004

## Selection Gate Standard

Promote only what proved itself

Version 1.1 Institutional Edition · Proof Gradient / Agent Evolution Protocol



AEP-001 defines the protocol. AEP-002 defines the docket. AEP-003 defines the packet. AEP-004 defines the gate.

## 1. Abstract

AEP-004 defines the Selection Gate: the propagation boundary that decides whether a candidate artifact, workflow, policy, tool, evaluation, context recipe, model route, agent behavior, or capability may be promoted, canaried, revised, rejected, archived, rolled back, or held for more evidence.

A Selection Gate is the institutional mechanism that converts proof into governed evolution.

## 2. Canonical Law

**No proof, no evolution.**

**No eval, no propagation.**

**No rollback, no release.**

## 3. v1.1 Implementation Upgrade

- Gate modes: advisory, manual, automated\_bounded, emergency
- Challenge records and certificate expiration
- Revocation and supersession model
- Fail-closed invariants
- Reference decision engine and conformance tools

## 4. Gate Decisions

Decision	Meaning
promote	Candidate may become the active default within approved scope.
approve_canary	Candidate may be deployed to limited scope under monitoring.
revise	Candidate has partial merit but must be modified and re-evaluated.
reject	Candidate must not propagate.
archive	Candidate is retained as evidence/history but not used.
rollback	Existing promoted capability must be reverted to prior safe state.
needs_more_evidence	Candidate cannot be judged until additional proof exists.

## 5. Gate Modes

- advisory - recommends but does not enforce
- manual - institutional approver issues final certificate
- automated\_bounded - automatic only in low-risk bounded scope
- emergency - pre-authorized rollback under incident conditions

## 6. Selection Certificate

# Selection Certificate Object Model

The signed decision record for what may evolve, where, and under which safeguards

### Candidate

artifact / workflow / policy / eval / tool / context / route / model

### Evidence Docket

claims, ProofPackets, evals, risks, costs, public-private boundary

### Gate Policy

thresholds, required evals, approvers, challenge window, rollback rules

### Decision

promote, canary, revise, reject, archive, rollback, needs\_more\_evidence

### Scope Controls

approved scope, expiry, review\_after, monitoring, stop conditions

### Certificate

hash, attestations, signature, public-safe summary

**The Selection Certificate is the propagation receipt.**

The Selection Certificate is the signed or recorded decision proving what may evolve, where, for how long, under what monitoring, and with which rollback target.

## 7. Decision Criteria

- Evidence sufficiency
- Evaluation sufficiency
- Policy sufficiency
- Risk sufficiency
- Cost and latency sufficiency
- Approval sufficiency
- Challenge sufficiency
- Rollout sufficiency
- Rollback sufficiency
- Claim-boundary sufficiency

## 8. Conservative Default Logic

### Selection Gate Risk Matrix

Quality gain is not enough. Safety, cost, approval, scope, and rollback must pass.

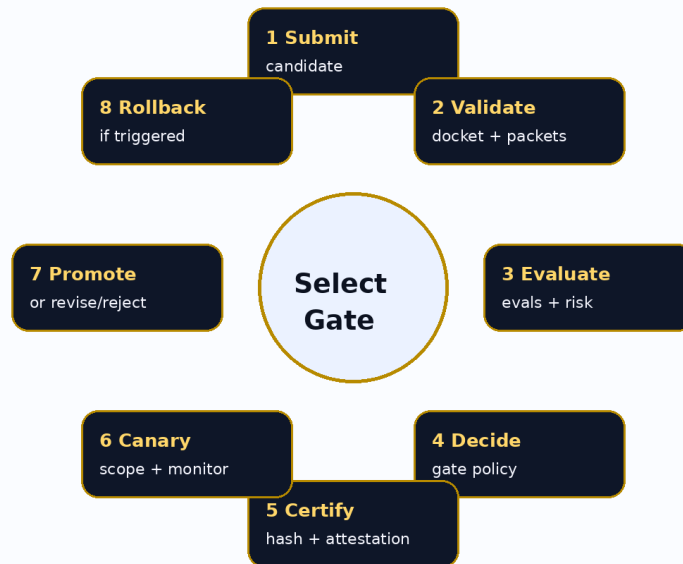
	Low risk	Medium risk	High risk	Protected
Strong evidence	PROMOTE	CANARY	CANARY	REVIEW
Partial evidence	CANARY	REVISE	REJECT	REJECT
Weak evidence	REVISE	EVIDENCE	REJECT	ROLLBACK
No rollback	REJECT	REJECT	ROLLBACK	ROLLBACK

**Default action under uncertainty: reduce scope, request evidence, reject, or roll back.**

## 9. Selection Gate Lifecycle

# Selection Gate Lifecycle

From candidate submission to certificate, monitoring, promotion, or rollback



**A gate is not approval theater. It is the mechanism that makes local proof become governed evolution.**

## 10. Invariants

- Promote requires evidence, eval success, risk acceptance, scope, monitoring, and rollback readiness.
- Canary requires evidence, eval success, limited scope, monitoring, stop conditions, and rollback readiness.
- Reject must record why the candidate cannot propagate.
- Rollback must identify the rollback target and trigger.
- Needs\_more\_evidence must specify missing evidence.
- Archive must not silently promote or route traffic.
- A protected-risk candidate must not promote through automated\_bounded mode unless explicitly authorized.
- A public Selection Certificate must not leak private or protected evidence.
- A Selection Certificate must include a claim boundary.
- Under uncertainty, the gate must fail closed.

## 11. Conformance Levels

Level	Requirement
Level 0	Informal selection with evidence and reason.
Level 1	Basic Selection Gate with candidate and decision record.
Level 2	Evaluated gate with eval, risk, and rollback status.
Level 3	Operational gate with policy, canary, monitoring, approval, challenge record, and claim boundary.
Level 4	Institutional gate with signed certificate, audit export, rollback readiness, expiry, review date, and public/private boundary.
Level 5	Sovereign / regulated gate with jurisdiction, protected-boundary classification, authorized approvers, evaluator attestations, timestamp authority, challenge window, revocation model, and public-safe controls.

## 12. Claim Boundary

AEP-004 does not claim achieved AGI, achieved ASI, perfect safety, legal compliance certification, financial or legal advice, guaranteed ROI, production readiness, government endorsement, or national-security readiness. AEP-004 defines a selection and propagation standard.

**GoalOS promotes only what proved itself.**