Consumer-Side Sandbox Pre-Activation Certification

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Sandbox-Then-Activate as a Structural Pattern

When a consuming system receives a signed adaptation artifact, the consumer's certification process runs before activation. The sandbox is a constrained environment in which the artifact executes against a representative subset of the consumer's typical inference workload, with the resulting behavior evaluated against the consumer's admissibility policy.

The certification produces a credentialed observation signed by the consumer's authority: this artifact, in this consumer's deployment, exhibits behavior consistent with admissibility policy P. Activation depends on the certification observation. Without certification, the artifact remains inactive regardless of its authoring credential.

Why Authoring-Side Certification Is Insufficient

The authoring authority cannot anticipate every consumer's policy. A skill certified safe by Anthropic for general-purpose Claude deployment may produce unacceptable behavior in a regulated-medical deployment, a consumer-financial deployment, or a defense deployment whose policy differs from the general default.

Consumer-side certification puts the policy decision where the policy authority lives: at the consumer. Authoring credentials remain meaningful — the consumer trusts that Anthropic-signed artifacts are what Anthropic claims they are — but the activation decision is the consumer's. This separation is structural rather than optional.

How Sandbox Composition Operates

The consumer maintains a credentialed sandbox environment instrumented to observe the artifact's behavior on representative inference patterns. The sandbox produces credentialed observations of the behavior; the consumer's admissibility policy evaluates the observations; if the policy admits, a certification observation is signed.

Certification is policy-dependent and time-bounded. A new policy version may invalidate prior certifications; an artifact authoring update may require re-certification. The architecture treats certifications as governance-credentialed observations subject to the same lifecycle as any other observation, including revocation, expiration, and replacement.

What This Enables for Regulated Deployments

Healthcare, financial services, defense, and government agent deployments all face compliance requirements that authoring-side certification cannot satisfy. The consumer must certify the artifact against its specific compliance regime; consumer-side sandbox certification provides the structural substrate.

The architecture also supports independent third-party certification. A defense deployment may require certification from a defense-credentialed authority in addition to its own; a medical deployment may require FDA-credentialed

certification. The composition is structural through credentialed observations rather than ad-hoc per-vendor integrations.