

OSAI: Technical Concept Note for Canonical Reference Identity

Technical Concept Note

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Scope:	Conceptual, non-operational technical concept note for a canonical reference identity substrate for software and AI agents, supported by companion technical artifacts.
Companion Artifacts:	OSAI-FW-MEM-01 ; OSAI-FW-GRM-01 ; OSAI-FW-SCH-01 ; OSAI-FW-RSL-01 ; OSAI-FW-DMO-01 ; OSAI-FW-DIF-01 ; OSAI-FW-REL-01 ; OSAI-FW-ABS-01 ; OSAI-FW-RO-02 ; OSAI-FW-L2-DC-01

1) Purpose

This Technical Concept Note makes the separation principle described in the standards-facing memo more concrete by positioning OSAI as a canonical reference identity layer for software and AI agents. It is supported by companion technical artifacts that define the OSAI ID grammar, three-record schema structure, resolver illustration, and narrow stable-identity demonstration.

This note is not a standalone proof layer. It does not define a production standard, credential model, registry deployment, authorization framework, policy engine, certification process, or enforcement mechanism. Its purpose is to align the conceptual posture of OSAI with companion materials that make the identity, authority, and attestation split more concrete.

An OSAI identity record does not certify that an agent is safe, authorized, reliable, governable, compliant, or suitable for autonomous deployment.

2) Design Objective and Separation Principle

The design objective is to preserve a stable referent for a software or AI agent while allowing authority, context, and evidence to vary without collapsing those functions into a single record. In practical terms, the architecture separates three questions that are often blended together:

- What subject is being referenced over time?
- What authority relationship has been declared relative to that subject?
- What evidence-linked assertion has been attached to that subject or to a related binding?

This separation is intended to preserve continuity, auditability, portability, and lifecycle clarity. Durable identity should survive changes in delegated authority, rotated credentials, updated model versions, and environment-specific restrictions without implying that OSAI itself performs authorization or enforcement.

3) Companion Technical Artifact Package

The companion technical artifact package consists of four primary bridge artifacts and two release-supporting notes:

- [OSAI-FW-GRM-01](#) defines the OSAI ID grammar.
- [OSAI-FW-SCH-01](#) defines the Canonical Identity Record, Authority Binding Record, and Attestation Record.
- [OSAI-FW-RSL-01](#) illustrates lookup-only resolver behavior.
- [OSAI-FW-DMO-01](#) demonstrates stable identity with changing authority in one narrow worked example.
- [OSAI-FW-DIF-01](#) explains how OSAI differs from downstream identity, authorization, protocol, certification, runtime-control, and procurement-adjacent systems.
- [OSAI-FW-REL-01](#) identifies the controlled release package and publication-conversion conditions.

These materials should be read together. The TCN describes the conceptual bridge; the companion technical artifacts provide the concrete structure supporting that bridge.

4) Three-Record Schema Posture

The schema posture separates canonical identity, authority binding, and attestation into linked but distinct records.

4.1) Canonical Identity Record

The Canonical Identity Record identifies and distinguishes the referenced subject in stable canonical terms. It anchors the OSAI ID and related descriptive fields without embedding live permissions, authority assignments, trust scores, compliance status, or runtime state.

4.2) Authority Binding Record

The Authority Binding Record records a declared authority relationship relative to a canonical subject. It does not constitute a live access grant, token, permission check, or enforcement decision.

4.3) Attestation Record

The Attestation Record records an evidence-linked assertion about a subject or related binding. It does not create the subject identity and does not certify truth, safety, or compliance by OSAI.

5) Resolver Illustration

The resolver posture is lookup-only. It is presented as an illustration of how an OSAI ID may retrieve linked reference artifacts without making downstream control decisions.

Resolver output may surface a Canonical Identity Record, linked Authority Binding Records, and linked Attestation Records. Resolver output does not determine whether an agent is authorized, trusted, compliant, reliable, governable, safe, or suitable for autonomous deployment.

No networked service, live registry operation, production deployment, or central OSAI custodianship is required or implied by the resolver illustration.

6) Narrow Demonstration

The narrow demonstration shows one point: the same canonical OSAI identity reference can remain stable while authority bindings vary and attestations remain separate. The demonstration uses one illustrative subject and does not claim production readiness, live policy interoperability, cryptographic verification, cross-vendor implementation support, or sector-wide adoption.

7) Adoption and Mapping Posture (Non-Normative)

The most practical early posture is template-driven and organization-supplied. Organizations may maintain their own records using structured templates, provided that the field definitions remain consistent and the relationships among records remain resolvable.

This reduces the need to frame OSAI as a central operator. OSAI can remain a canonical reference identity posture that maps into downstream IAM, authentication, authorization, protocol, security, audit, procurement, and review systems without replacing them.

8) Standards-Facing Considerations (Non-Normative)

Any future standards mapping should preserve the following boundaries:

- Identity is not authority.
- Authority is not attestation.
- Attestation is not certification.
- Delegation reference is not a delegation token.
- Audit reference is not a telemetry platform.
- Resolver output is not authorization.
- A single vendor directory should not be presumed to be the only place agent identity exists.
- The framework should remain model-agnostic and capable of mapping into downstream credential, policy, protocol, audit, and review systems without being reduced to them.

9) Relationship to Prior Memo and Companion Materials

The standards-facing memo introduced the upstream separation principle. This Technical Concept Note provides a controlled bridge from that principle to companion technical artifacts. It should not be treated as a standalone proof layer, a full protocol claim, or an implementation standard.

The companion materials are intended to make the separation principle concrete enough for review, critique, and later controlled development without prematurely asserting production maturity.

References

[OSAI-FW-MEM-01](#)

OSAI: A Neutral Naming and Reference Substrate for Software and AI Agents Standards-Facing Memo (Public), v1.0, issued March 5, 2026.
<https://www.InfrastructureOSAI.com/assets/OSAI-FW-MEM-01.pdf>

[OSAI-FW-GRM-01](#)

OSAI: Canonical Identifier Grammar for Software and AI Agents Issued Companion Technical Artifact, v1.0, issued May 7, 2026.
<https://www.InfrastructureOSAI.com/assets/OSAI-FW-GRM-01.pdf>

[OSAI-FW-SCH-01](#)

OSAI: Three-Record Schema Template Pack for Software and AI Agents Issued Companion Technical Artifact, v1.0, issued May 7, 2026.
<https://www.InfrastructureOSAI.com/assets/OSAI-FW-SCH-01.pdf>

[OSAI-FW-RSL-01](#)

OSAI: Minimal Resolver Illustration for Software and AI Agents Issued Companion Technical Artifact, v1.0, issued May 7, 2026.
<https://www.InfrastructureOSAI.com/assets/OSAI-FW-RSL-01.pdf>

[OSAI-FW-DMO-01](#)

OSAI: Narrow Demonstration of Stable Identity with Changing Authority Issued Companion Technical Artifact, v1.0, issued May 7, 2026.
<https://www.InfrastructureOSAI.com/assets/OSAI-FW-DMO-01.pdf>

[OSAI-FW-DIF-01](#)

OSAI: Differentiation Note for Canonical Reference Identity and Downstream Agent Systems Issued Companion Technical Artifact, v1.0, issued May 7, 2026.
<https://www.InfrastructureOSAI.com/assets/OSAI-FW-DIF-01.pdf>

[OSAI-FW-REL-01](#)

OSAI: Companion Artifact Index and Release Note Issued Release Coordination Artifact, v1.0, issued May 7, 2026.
<https://www.InfrastructureOSAI.com/assets/OSAI-FW-REL-01.pdf>

[OSAI-FW-ABS-01](#)

OSAI Framework: Abstract and Preface Issued public artifact.
<https://www.InfrastructureOSAI.com/assets/OSAI-FW-ABS-01.pdf>

[OSAI-FW-RO-02](#)

Reader's Orientation Issued public artifact.
<https://www.InfrastructureOSAI.com/assets/OSAI-FW-RO-02.pdf>

[OSAI-FW-L2-DC-01](#)

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<https://www.InfrastructureOSAI.com/assets/OSAI-FW-L2-DC-01.pdf>