



EB-PB-013 · ENTERPRISE PRODUCT BRIEF

EarthAI Product Brief

Trust infrastructure for the machine economy: on-chain identity for AI agents, scoped and expiring mandates enforced at execution time, auditable decision trails, portable reputation, and native micropayment rails — so machine-initiated transactions carry the same accountability as human-initiated ones.

AGENT IDENTITY

SCOPED MANDATES

EBS-6551 · 4671

AUDIT TRAILS

MACHINE PAYMENTS

Version 1.0 · **Status** Public Release · **Date** July 2026**Canonical source** Earth Blockchain Whitepaper v2.0**Audience** enterprises deploying agents · AI platforms · financial institutions · regulators

EarthAI — The Machine Trust Layer

VERIFIABLE IDENTITY AND ACCOUNTABILITY FOR AUTONOMOUS AGENTS

Enterprises are delegating real economic authority to software agents that have no verifiable identity, no bounded authority, and no audit trail a counterparty can check. EarthAI supplies the missing trust stack: every agent gets an on-chain root controlled by its principal, authority arrives as scoped, expiring mandates that policy contracts enforce on every action, reputation accrues as non-transferable records, and payments settle at machine speed in EARTH. A compromised agent cannot exceed its mandate; a revoked agent loses authority instantly; and everything either one ever did remains signed, final, and attributable.

At a Glance	
Category	Machine trust layer — the suite's fifth product and the protocol's Intelligence Layer (Whitepaper §4, §12.5).
Core EBS standards	EBS-721 (agent root identity), EBS-6551 (token-bound agent account), EBS-4671 (mandates), EBS-5192 (reputation and compliance records), EBS-20/EARTH channels (payments).
Primary buyers	Enterprises deploying autonomous procurement, treasury, and operations agents; AI platform vendors needing accountable execution; data and API marketplaces; financial institutions piloting agentic workflows; regulators requiring AI audit trails.
Commercial model	Per-agent identity and mandate fees; verification API metering; micropayment channel fees; enterprise policy-suite subscriptions — settled in EARTH.
Canonical reference	Whitepaper v2.0 §12.5; platform interfaces in EB-API-003; contract patterns in EB-SCC-005.

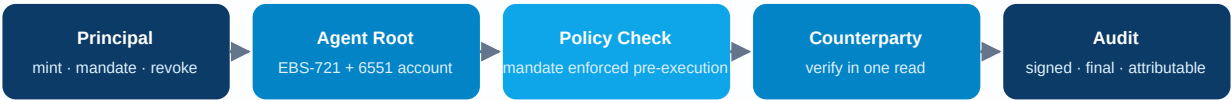
1. The Problem

The machine economy is arriving faster than its accountability layer. Agents already negotiate, purchase, and schedule — authenticated, at best, by API keys that prove possession rather than authority, bounded by policies that live in the same compromised process they are meant to constrain, and audited by logs the operator can edit. Counterparties cannot answer the three questions that make commerce possible: who does this agent act for, what is it allowed to do, and can I rely on its record? Platform-proprietary agent frameworks answer them with lock-in; regulation increasingly demands answers with evidence (Whitepaper §3.1, §12.5).

2. Solution Architecture

An agent's root identity is an EBS-721 asset controlled by its principal (a person or organization), extended with an EBS-6551 token-bound account serving as the agent's wallet and execution surface. The principal issues mandates — EBS-4671 credentials encoding scoped, expiring authority: spend limits, counterparty classes, action types — while non-transferable track-record and compliance flags accrue as EBS-5192 records. Policy contracts enforce mandates at execution time in the account's validation path, so an agent cannot exceed its authority even if its runtime is compromised; every action is signed, final in seconds, and attributable. Verification services let any counterparty — human or machine — resolve identity, mandate, and reputation in one read before transacting; micropayment channels support machine-scale settlement in EARTH for API calls, data, and services (Whitepaper §12.5; enforcement patterns in EB-SCC-005 §6–§7).

Fig. 1 — EarthAI: Agent Trust Stack



Principal mints and mandates; policy contracts check every action; counterparties verify identity, authority, and reputation in one read.

Fig. 1. Principal mints and mandates; policy contracts check every action; counterparties verify identity, authority, and reputation in one read.

EARTH BLOCKCHAIN

3. Workflow

1. **Register.** Principal mints the agent's root identity and token-bound account; organizational agents map to the enterprise wallet governance of EB-ENT-006 §4.
2. **Mandate.** Principal issues scoped authority credentials — spend limits, counterparty classes, action types, expiry — and funds the account within limits.
3. **Act.** The agent negotiates and transacts; policy contracts validate every action against the live mandate before execution.
4. **Audit.** Decision trails anchor on-chain; principals, auditors, and counterparties replay exactly what the agent did and under what authority.
5. **Revoke / renew.** Mandates expire or revoke instantly; authority dies with them — history does not.

4. Standards and Platform Integration

Component	Role in EarthAI
EBS-721 + EBS-6551	Root identity and token-bound execution account; control follows the principal by construction.
EBS-4671	Mandates as revocable credentials — authority that can be inspected, scoped, and killed.
EBS-5192	Non-transferable reputation and compliance records; an agent cannot buy a clean history.
Policy contracts	Pre-execution enforcement in the account validation path (EB-SCC-005 §7.2).
EARTH channels	Micropayment rails for machine-scale API, data, and service settlement (Whitepaper §11–§12.5).

5. Deployment and Integration Path

- **Pilot (weeks).** One agent, one workflow: register a procurement or data-purchasing agent on testnet, issue a narrow mandate (single counterparty class, small daily limit), run real tasks, and review the decision trail with your risk team.
- **Integration (months).** Wrap existing agent runtimes with the SDK's account layer; connect verification checks into counterparty-facing services; wire mandate issuance and revocation into your identity-governance workflow; enable payment channels for metered machine services.
- **Production (quarters).** Fleet-scale registration with per-team mandate policies; agent-to-agent commerce with pre-transaction verification both ways; compliance exports for AI-governance reviews; reputation-informed counterparty selection.

6. Business Model and Value

Dimension	EarthAI
Target customers	Enterprises deploying autonomous procurement, treasury, and operations agents; AI platform vendors needing accountable execution; data and API marketplaces; financial institutions piloting agentic workflows; regulators requiring AI audit trails.
Business model	Per-agent identity and mandate fees; verification API metering; micropayment channel fees; enterprise policy-suite subscriptions — settled in EARTH.
Revenue opportunities	Agent registry network effects, compliance and audit tooling for AI-governance regimes, agent-to-agent commerce settlement volume, reputation data services.
Competitive advantage	Agency modeled in open standards — identity, account, mandate, reputation — rather than platform lock-in; deterministic finality at machine speed; the only suite where an agent's counterparties (documents, credits, assets, shipments) are natively verifiable on the same chain.

7. Enterprise Use Cases

Autonomous procurement within board-approved mandates; AI treasury operations under on-chain spend policies; machine-to-machine data and compute markets; auditable AI decision trails for regulated industries; agent-verified interactions between enterprise copilot fleets; marketplace access control by verified agent reputation.

8. Measuring Success

- **Authority containment.** Actions blocked by policy contracts; zero successful over-mandate executions (the design invariant).
- **Revocation latency.** Time from revoke decision to on-chain authority death (target: one finalized block, $\approx$ seconds).
- **Auditability.** Share of agent actions with complete replayable trails; audit preparation hours for AI-governance reviews.
- **Commerce velocity.** Verified agent-to-agent transactions; micropayment channel throughput and settlement cost.

9. Security and Compliance Notes

- **Compromise containment.** A hijacked agent runtime is bounded by its mandate — the enforcement point is on-chain, outside the compromised process.
- **Principal accountability.** Every agent resolves to a responsible principal; orphaned authority cannot exist because mandates expire.
- **Reputation integrity.** EBS-5192 records are non-transferable and issuer-attributed; track records cannot be bought, only earned.
- **Governance posture.** Decision trails and mandate registries provide the evidence layer AI-governance regimes increasingly require; legal characterization of agent actions remains jurisdiction-specific.

Getting started. Register a test agent on testnet with the SDK (EB-API-003 §6), apply the mandate-enforcement pattern from EB-SCC-005 §7.2, and contact the enterprise team for fleet policy tooling.

EB-PB-013 v1.0 (July 2026). This brief expands Whitepaper v2.0 §12.5 with deployment and operational guidance; the Whitepaper governs in any discrepancy. References to reporting or regulatory frameworks describe structural alignment of tooling, not certification or approval. Nothing herein constitutes financial, investment, tax, or legal advice. © 2026 Earth Blockchain Corp. (Wyoming, USA) · Alpha Blockchain Private Limited (India). All rights reserved.