DESIGN INVARIANT ("RAILS, NOT VAULTS"): Cloud Workers and Lambda remain strictly read/quote/tracking engines with zero issuer seeds. Execution runs strictly via client wallets, Fireblocks TAP quorum, or the dual-gated local operator CLI (`scripts/xrpl-tradeline-cli.mjs`).

XRPL Tradelines & Institutional Issuance — Pre-Build Strategy

ADR-0003: Authorized TrustLines + XLS-70 Credentials + TokenEscrow + Clawback; XLS-65/66 gated on live Mainnet amendment activation.

FRONT PORTAL	HQ & AI DESK	X402 DOSSIER	TRACKER D1
`xrpl.unykorn.ai`	`hq.unykorn.ai`	`/api/v1/iou-dossier`	`unykorn-tracker`

1. Six-Phase Pre-Build Strategy & Mandatory Verification Gates

ARCHITECTURE PHASE	ENGINEERING & LEGAL VERIFICATION GATES
Phase 0 SPV Isolation, Security Interest Perfection & Safekeeping Partners	• Isolate each collateral pool in an independent bankruptcy-remote SPV (e.g., UnyKorn Grid SPV LLC) • Verify third-party safekeeping / bailee contract (Tri-Party Treasury Bank, DACA Bank, Brink's/Malca-Amit, TN Bonded Warehouse, Fireblocks Console) • Obtain explicit FTH Securities Legal sign-off before issuing outside Testnet
Phase 1 Live XRPL Amendment & Consensus Audit	• Decode singleton Amendments ledger entry 7DB0788C... via /api/xrpl/amendments • Confirm Credentials (XLS-70), TokenEscrow, Clawback, MPTokensV1 (XLS-33), PermissionedDomains (XLS-80), PermissionedDEX (XLS-81) • Keep XLS-65 SingleAssetVault & XLS-66 LendingProtocol strictly gated until live Mainnet enabled === true
Phase 2 Cold/Hot Issuer Architecture, Fireblocks TAP & XLS-1 Domain Binding	• Configure dedicated SPV issuer account with asfRequireAuth (2) + asfDefaultRipple (8) BEFORE opening any TrustLines • Set account Domain hex to stellar.unykorn.ai matching /.well-known/xrp-ledger.toml • Require Fireblocks TAP multi-approver quorum (or air-gapped hardware quorum) for tfSetfAuth and draw Payments; zero keys in cloud workers
Phase 3 Deterministic Testnet Negative-Path Rehearsal	• Execute scripts/xrpl-tradeline-cli.mjs demo --network testnet covering all 12 lifecycle steps • Verify unsigned/unauthorized draw FAILS with tecPATH_DRY before tfSetfAuth approval • Verify exact BigInt ACT/365 accrual with zero floating-point dust and store immutable tx evidence JSON
Phase 4 Mainnet Dual-Gate Preflight & Supervised Issuance	• Run /api/xrpl/tradelines/preflight checking holder reserve (>= 1.0 XRP + 0.2 XRP/object), XLS-70 Credential acceptance, and issuer flags • CLI enforces UNYKORN_ALLOW_MAINNET=1 + exact typed confirm phrase before mainnet signing • Commit SHA-256 collateral & draw digests to UnyKorn Record Chain (37332)

ARCHITECTURE PHASE	ENGINEERING & LEGAL VERIFICATION GATES
Phase 5 Continuous Edge Tracker (D1), 402 Revenue & 8004 Agent Embedding	• Every /iou, PDF download, XRPL API, and x402 dossier call logs masked /24 telemetry to unykorn-tracker D1 • Paid HTTP 402 / @stellar/mpp /api/v1/iou-dossier ($0.25 USDC) bundles live XRPL underwriting + ISO 20022 sese.023 • All 100 Stellar 8004 agent cards & MCP tools expose XRPL Tradeline inspection and strategy directly inside hq.unykorn.ai (Finn, Hobbs, Kal)

UNYKORN LLC — PROTOCOL REFERENCES & EVIDENCE

OFFICIAL XLS STANDARDS, INTEGER ACCOUNTING & EMBEDDED 402 / 8004 ENDPOINTS

2. Canonical XRPL & Fireblocks Developer Specifications

SPECIFICATION	AUTHORITATIVE REFERENCE URL
Credentials (XLS-70 KYC/KYB Gate)	`https://xrpl.org/docs/concepts/decentralized-storage/credentials`
Authorized Trust Lines (RequireAuth + tfSetfAuth)	`https://xrpl.org/docs/concepts/tokens/fungible-tokens/authorized-trust-lines`
TrustSet Transaction Reference	`https://xrpl.org/docs/references/protocol/transactions/types/trustset`
AccountSet Flags Reference	`https://xrpl.org/docs/references/protocol/transactions/types/accountset`
TokenEscrow & EscrowCreate	`https://xrpl.org/docs/concepts/payment-types/escrow`
Clawback (XLS-39)	`https://xrpl.org/docs/concepts/tokens/fungible-tokens/clawback`
Multi-Purpose Tokens (XLS-33)	`https://xrpl.org/docs/concepts/tokens/fungible-tokens/multi-purpose-tokens`
Permissioned Domains (XLS-80)	`https://xrpl.org/docs/concepts/tokens/decentralized-exchange/permissioned-domains`
Permissioned DEX (XLS-81)	`https://xrpl.org/docs/concepts/tokens/decentralized-exchange/permissioned-dexes`
XLS-65 Vaults & XLS-66 Lending Protocol	`https://xrpl.org/docs/concepts/tokens/lending-protocol`
XRPL Domain Verification (xrp-ledger.toml / XLS-1)	`https://xrpl.org/docs/references/xrp-ledger-toml`
Fireblocks Tokenization & TAP Governance	`https://developers.fireblocks.com/docs/tokenization-overview`

3. Verified XRPL Testnet Lifecycle Run & Pure BigInt Accounting

COMPONENT	VERIFIED VALUE / FORMULA
Verified Testnet Accounts (Ledger #20481965)	`Issuer rhqGoX6Fai9V3AfoWEjDRtoJyW1sk4b2GK · Credential rafgGJY628RyAH4WUSBVQ4e2Bs95pGBp1j · Holder rpno8F79Pd9Zd9goD9S7zryU1bDebgroAx`
Negative-Path Proof	Live XRPL Testnet run proving RequireAuth blocks unauthorized draws (tecPATH_DRY) until XLS-70 KYB Credential + tfSetfAuth approval.
Integer Reserve Guard	`requiredDrops = 1_000_000n + BigInt(ownerCount + addObjects) * 200_000n`
ACT/365 Integer Accrual	`accrualUnits = (drawnUnits * BigInt(aprBps) * BigInt(days)) / (10_000n * 365n)`
Embedded 402 / 8004 / HQ Surfaces	`https://stellar.unykorn.ai/api/v1/iou-dossier · https://stellar.unykorn.ai/.well-known/agent-card.json · MCP (11 tools) · hq.unykorn.ai`

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