

PALADIN
Programmable Privacy

The next generation of Paladin

LF Decentralized Trust - Privacy Workshop

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PALADIN

Programmable Privacy

Paladin V1 Released June 25th 2026

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Privacy Frameworks

- **ZKP Tokens** — ZKP rules & custom logic
- **Issuer Backed Tokens** — EVM or off-chain notarization
- **Private EVM** — Any EVM Smart Contract
- *... next new privacy model on EVM*

Wallet Functions

- **Token & Contract APIs**
- **Private Data Store**
- **Key Management**
- **ZKP Proof Engines**

Client Functions

- **Transaction Orchestration**
- **Indexing**
- **Event streams**
- **Encrypted Data Transfer**

Existing (non-private) Tokens / Contracts

Atomic Swap Contracts

Privacy Preserving Smart Contracts

EVM

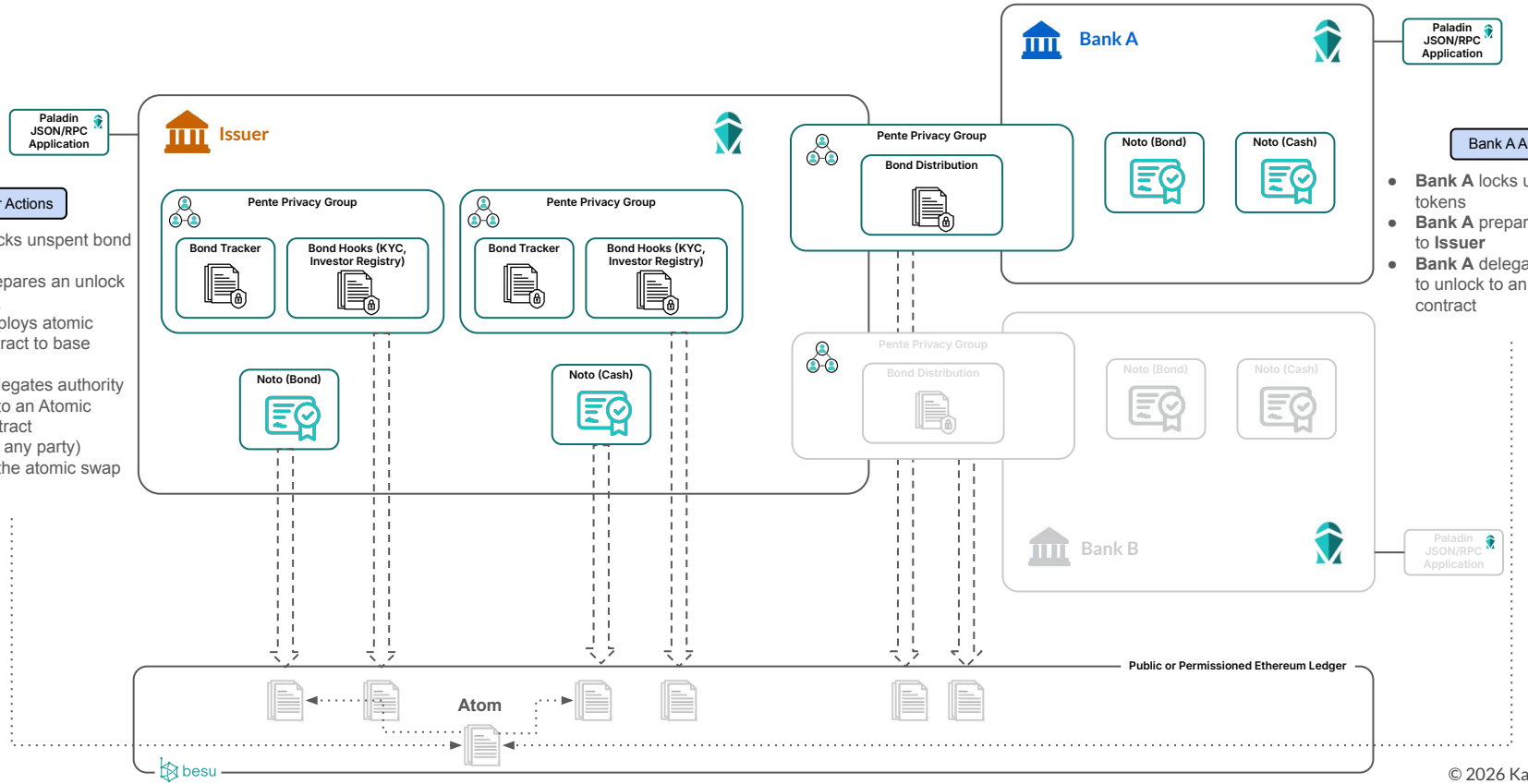
*no modifications necessary

Node Registry

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Paladin - DvP Use Case

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Issuer Actions

- **Issuer** locks unspent bond tokens
- **Issuer** prepares an unlock to **Bank A**
- **Issuer** deploys atomic swap contract to base ledger
- **Issuer** delegates authority to unlock to an Atomic Swap contract
- **Issuer** (or any party) executes the atomic swap

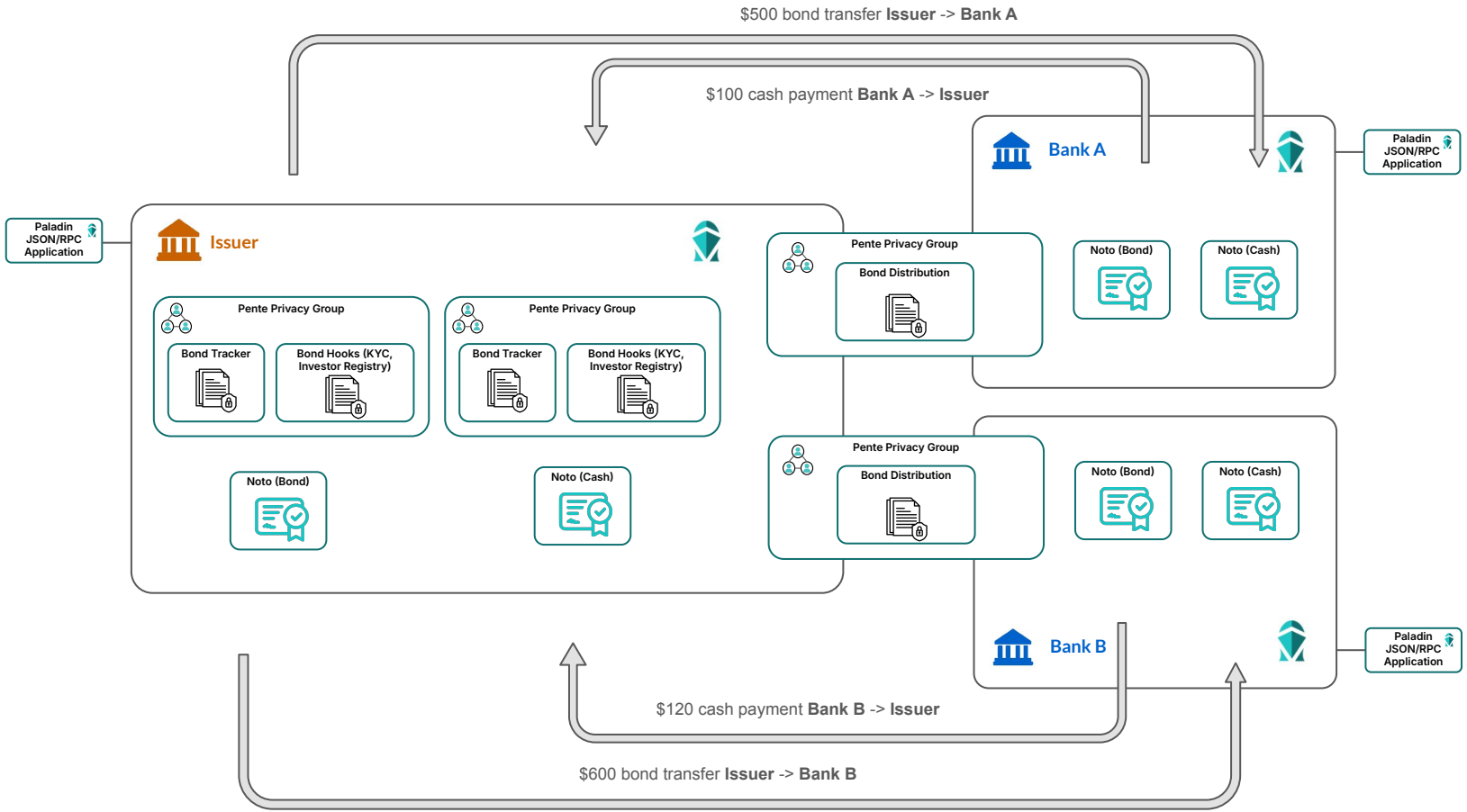
Bank A Actions

- **Bank A** locks unspent CBDC tokens
- **Bank A** prepares an unlock to **Issuer**
- **Bank A** delegates authority to unlock to an Atomic Swap contract

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Paladin Demo - Bond/CBDC DvP

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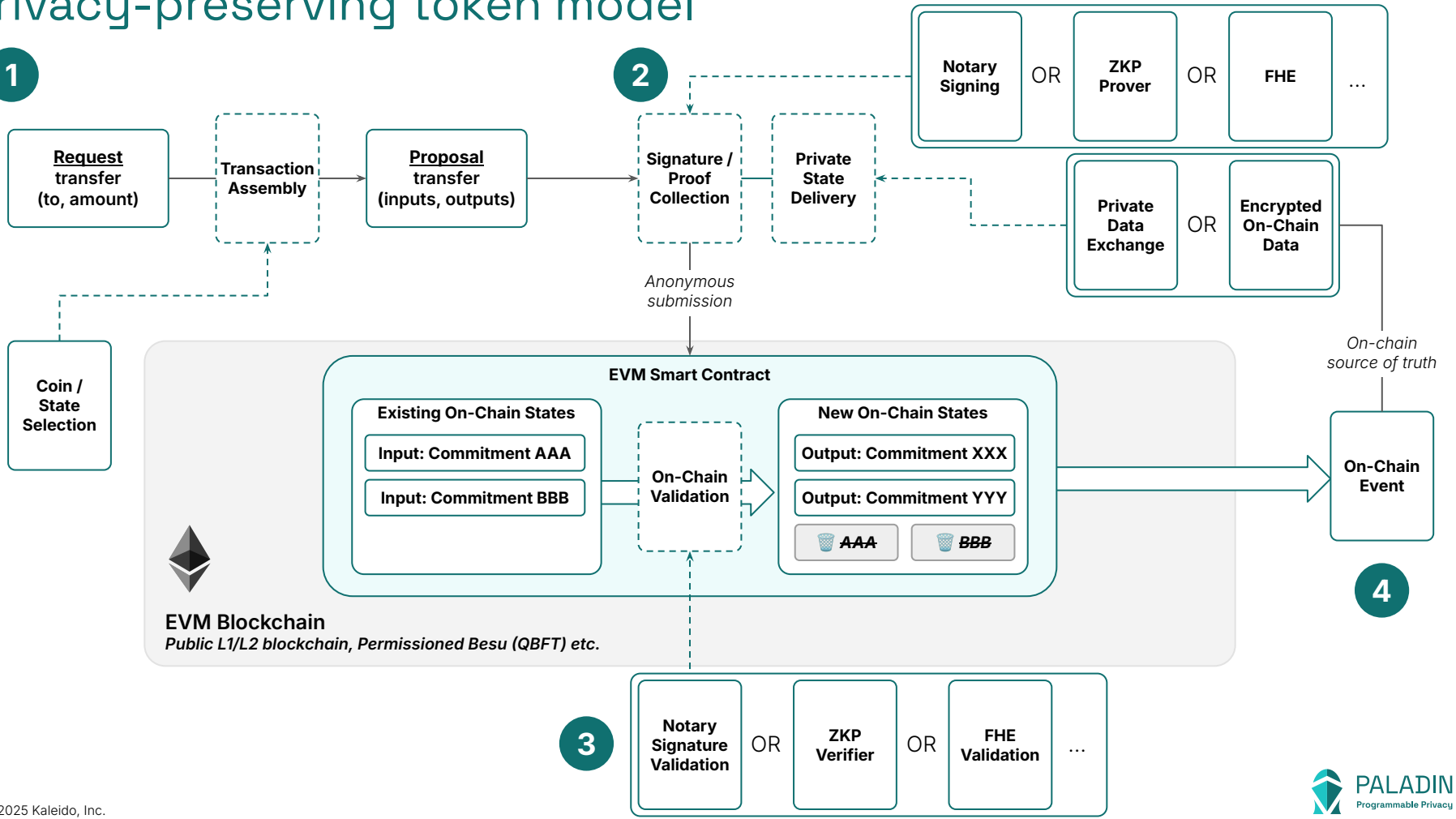


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Demo

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Privacy-preserving token model



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EVM Privacy Token Standards

Transparent tokens: ERC-20 established one simple standard

What: Fungibility
Anyone holding a token is certain it is worth the same as anyone else's

How: Transparency
Visibility of every transaction and balance means nobody can cheat the system.

What: Atomic programmability
DeFi ecosystems, exchanges, DvP & PvP transactions, bridge locking etc.

How: Smart contract accounts
Third–party smart contracts can control/lock/hold value

What: Wallet support
Wallets and enterprise custody solutions are widely available for consumer and enterprise

How: Data & signing simplicity
Indexing transactions / balances is easy directly from the blockchain, as is signing and submission

Shielded tokens: Composable standards are emerging

Fungible Token Standards
Establishing new trust models

ERC-7984: Account-based
All amounts [..] represented by confidential pointers [..] balances and transfer amounts are confidential. Pointers refer to data stored elsewhere–onchain or offchain.
Note ERC-8227 add extensions for FHE trust model

ERC-83*xx*: Notary-based
Confidential token interface in which private token state transitions are validated under the authority of a designated notary, or notary group.

ZKP-based
Currently lead by implementation (not standards) due to pace of evolution.
Base standard is zkSNARK

Programmability standards
Enabling privacy-preserving ecosystems

ERC-20: Deposit/withdrawal
By shielding/unshielding token balances from/to ERC-20 tokens the history can be masked within the rules of the shielded token) enabling existing DeFi

ERC-7984: Account-based
Shielded balances can be composed like ERC-20s, as long as the value can be proven to stakeholders.

ERC-8316: Private locks
Allows composition of any number of privacy preserving operations, transparent (ERC-20), private account-based, UTXO, or private EVM, across Notary, ZKP, and FHE trust models.

Wallet standards
Avoiding one-stack-per-token

Paladin: Enterprise focused
Modular runtime, SDK and orchestration engine for tokens with a variety of trust models + cross-token programmability.
Handles fully off-chain data ecosystems, as well as encrypted on-chain

Plugins: Railgun, Noto, Zeto + Private EVM (Pente)

Kohaku: End-user focused
SDK and reference browser based wallet implementation, with plugins for a number of Web3 native shielded token ecosystems that use on-chain encrypted data.

Plugins: Railgun, Tornado, 0xbow

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Paladin Deep Dive Workshop

LEARN MORE AT
kaleido.io/events/paladin-privacy-workshop

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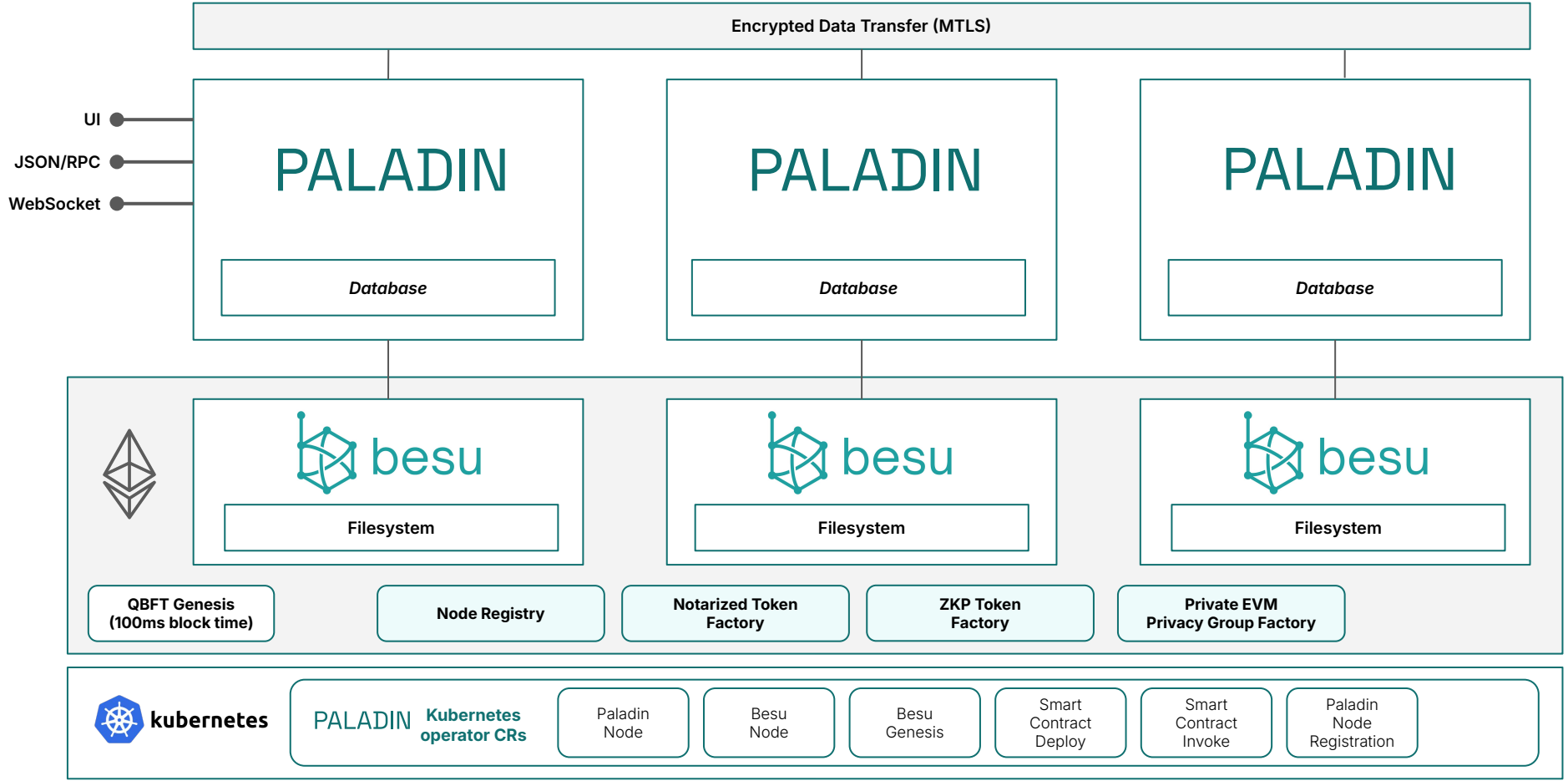
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- **Privacy Preserving Smart Contracts**
- **EVM** *no modifications necessary
- **Node Registry**

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Backup

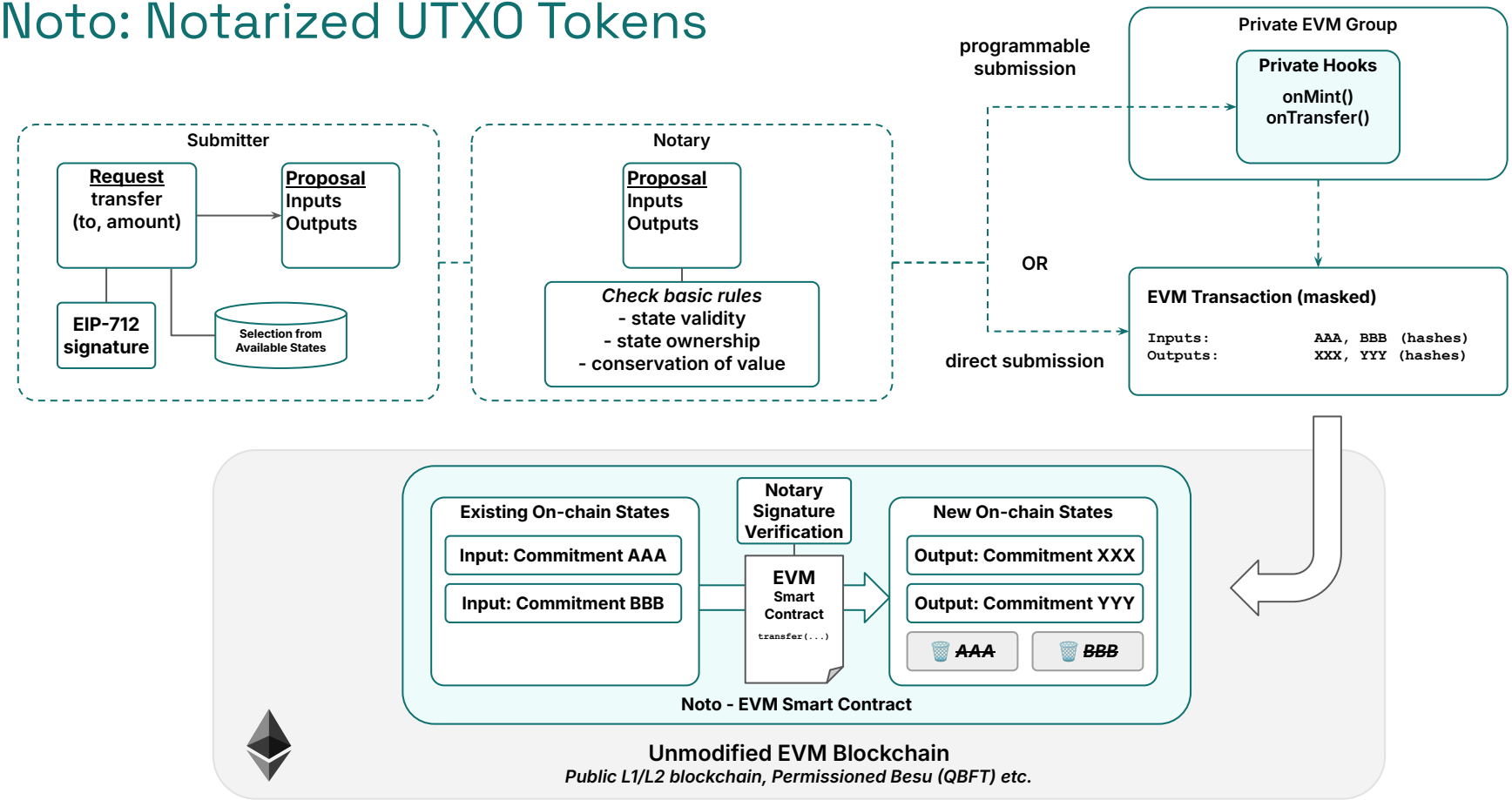
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Paladin Deployment Automation: Get Running in Minutes



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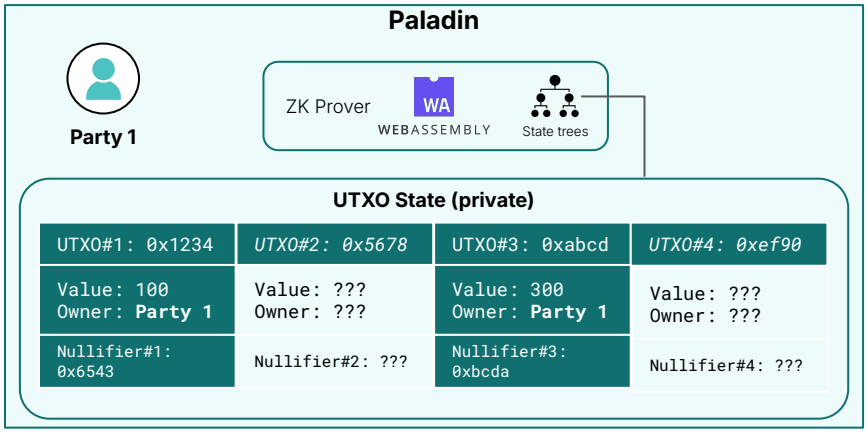
Noto: Notarized UTXO Tokens

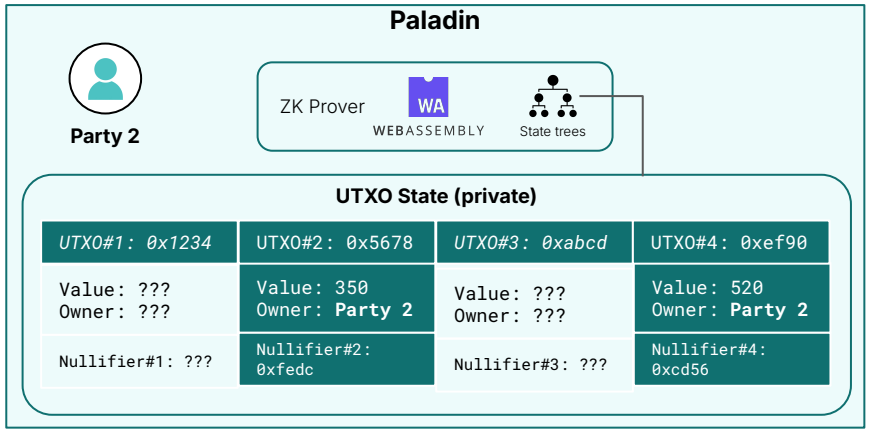


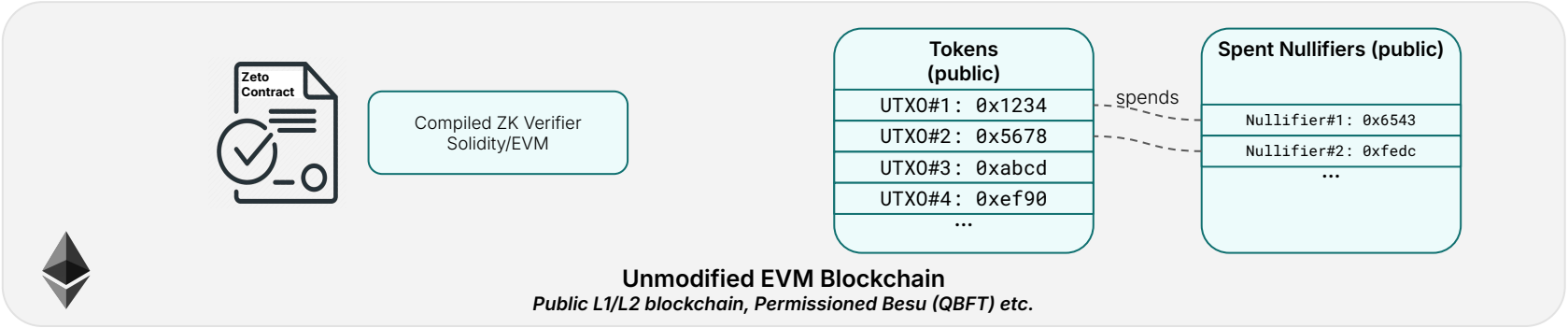
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Zeto: ZKP Backed Tokens

Using **Commitments** to represent the token economy, and **Zero Knowledge Proofs** to enforce transaction processing rules. The Paladin client maintains private states on behalf of the users. The blockchain verifies the proofs.

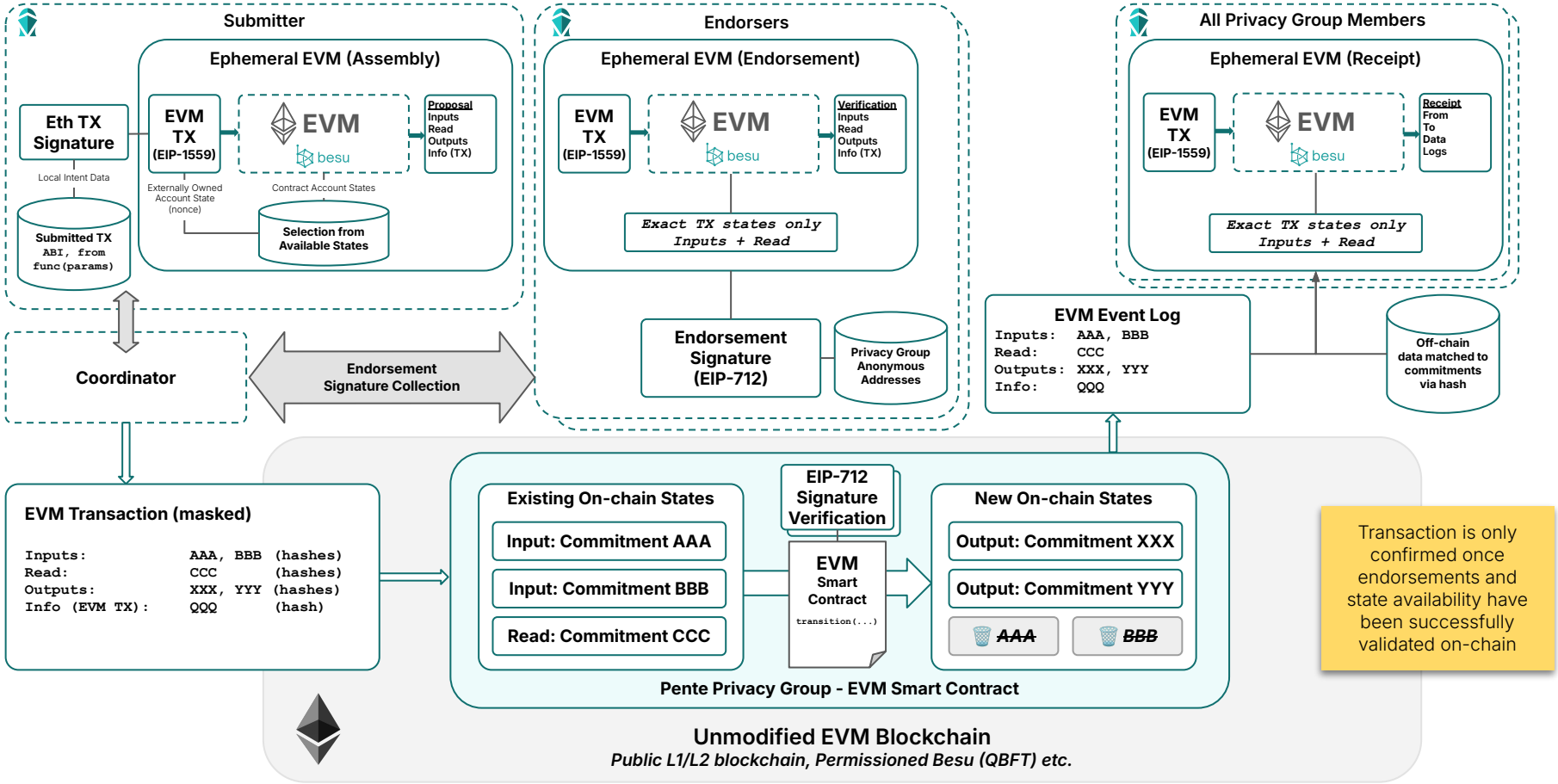






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Pente EVM Privacy Groups: CONFIRMATION



Transaction is only confirmed once endorsements and state availability have been successfully validated on-chain

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