TOKEN MANAGEMENT PLATFORM
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The next digital economy is decentralised and token-based. A shift from on-chain to off-chain applications is already taking place. Staking and DeFi applications require the ability to add custom records and business logic that contain application-specific metadata.

70-80% of relevant transaction metadata is not stored on the blockchain but in legacy systems.

Regulatory bodies continue to increase their demands, requiring higher transparency.

The vast majority of tokens today are Ethereum ERC20 tokens. However, smart contracts are expensive and have a low transactional speed.

Fees in standard main chains are too high to support large amounts of transactions in the network.
To address these shortcomings, RIDDLE&CODE built a comprehensive and unified Token Management Platform (TMP).

The cloud-based platform manages all aspects of key generation, custody, AML, regulatory compliance and token management with unmatched versatility and security in the energy, finance, material and mobility sectors.

TMP incorporates token-based incentive, payment and exchange services, including the support of staking, DeFi and agile integration of the necessary off-chain business logic.
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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<tr>
<td><strong>#1 POLICY LAYER</strong></td>
<td>Adds cryptographically secured custom business logic to control off-chain applications and simplify smart contracts.</td>
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<td><strong>#2 CONFIDENTIAL COMPUTING</strong></td>
<td>Encapsulates and secures all components that are required for an off-chain application.</td>
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<td><strong>#3 REGULATORY COMPLIANCE</strong></td>
<td>Real-time audit trails on the chain and human-readable policy rules written in a natural language.</td>
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<td><strong>#4 CUSTODY</strong></td>
<td>Comprehensive and highly secure custody service with unlimited and segregated custodial wallets.</td>
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<td><strong>#5 BIGCHAINDB</strong></td>
<td>Identity and metadata chain optimised with high throughput, low latency, immutable data storage and built-in asset support.</td>
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<td><strong>#6 APIS / PROTOCOL</strong></td>
<td>Support for third-party applications and HSMs.</td>
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<td><strong>#7 HARDWARE APPROVAL DEVICES</strong></td>
<td>Authentication and role-based access control.</td>
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<td><strong>#8 FULL VIRTUALISATION</strong></td>
<td>The banking-grade platform operates in the cloud.</td>
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<td><strong>#9 TOKENIZATION</strong></td>
<td>Issuance and management of the full lifecycle of asset tokens.</td>
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WHERE FLEXIBILITY MEETS SECURITY.

Minimise operational overhead and risk.

- Ensure business continuity with secure key generation, management and recovery processes. Keys are generated in a secure and auditable way with no possibility for others to intercept or access them and with a secure key recovery process in case of disaster.
- Remove the hassle of managing hot and cold storage separately by combining cold storage level security with hot wallet operational efficiency.
- Sign in, authenticate and approve transactions in the most secure way with cryptographically protected Approval Devices featuring FIPS 140-2.

Provide custodial services to a wide range of customers.

- Create unlimited secure custodial wallets for your customers. Easily deploy new wallets or recover existing customer wallets.
- Achieve full account segregation for customer wallets as per regulatory requirements in several jurisdictions in the EU and Switzerland.
- Access 12 leading cryptocurrencies and the most prominent ERC20 and ERC721 tokens. Connect to all crypto networks with the built-in full node service.

Always work according to your own business rules and compliance policies using the Policy Layer.

- Set up segregation of roles between departments and their roles in your operations. Pre-define approval workflows to execute customised signing schemes (i.e., define personal rules, such as limits for signees, assets, amounts, trusted recipients or blocked recipients, the hour of the day, etc.).
- Detect suspicious activities with Coinfirm’s AML platform that can recognise red flags for anything from Anti-Money Laundering (AML) and Countering the Financing of Terrorism (CTF) to fraud and darknet drug trafficking.
- Access the real-time audit record of all transaction-related details and metadata. Export and share human-readable documents with relevant regulatory bodies and auditors.

Integrate without disrupting existing processes and systems.

- Interconnect key and address derivation schemes with customer accounts while being compliant with strict account segregation requirements.
- Connect client services, such as order systems, for deeper integration into existing clients’ workflows via modular API architecture.
THE ARCHITECTURE.

Client
- Services controlled by client
- Control and manage keys and policies
- Create and approve transactions

RIDDLE & CODE
- Generate and secure keys
- Govern and sign transactions
- Reliable and robust full nodes for all currencies

Ecosystem Services
- Added services from ecosystem and partners to expand the capabilities

RIDDLE&CODE

ECOSYSTEM SERVICES

Supporting the 12 leading cryptocurrencies and all ERC20 tokens
THE COMPONENTS.

Order Services
Integrate with existing client systems for the creation and management of digital asset orders.

Client User Interface
The dedicated web interface provides access to all essential operations of the Token Management Platform.

Financial Services
Interfaces to the existing information and core banking systems.

Approval Device
A physical device to control access to the web interface and management of settings and policies.

Policy Engine
Allows clients to define cryptographically secured rules that govern and control all operations related to transactions, from creation to execution.

Hardware Security Module (HSM)
Provides a secure and trusted entropy that assists during the key generation process.

Trusted Full Nodes
Dedicated service to provide stable and reliable full node connectivity for all supported currencies.

Transaction Logic
Forwards approved transactions to the Confidential Keystore where they are signed.

API Integration
Integration of financial industry protocols with the existing systems.
- HSM API (key entropy and/or key storage)
- Avaloq API (via Hash fingerprint)
- Integrate into relevant SW and applications (e.g., SWIFT, FIX, Exchanges)

Confidential Keystore
A cryptographically secured component within the TEE that stores keys and signs transactions.

Notarisation and Certificate Layer
RIDDLE&CODE integrates a dedicated notarisation and certificate tracking layer to create, attest and track digital certificates across their lifecycle.

Audit Ledger
BigchainDB-based, immutable, real-time audit record of all transaction-related details and metadata, including human-readable exporting documents.

THE FOLLOWING COMPONENTS ARE SECURED INSIDE THE TRUSTED EXECUTION ENVIRONMENT (TEE).

THE CLIENT IS THE ONLY ONE WHO HAS ACCESS TO THE TEE AND ITS COMPONENTS.
TAKE PART IN THE THRIVING TOKEN ECONOMY AND SCALE YOUR BUSINESS WITH RIDDLE&CODE’S TOKEN MANAGEMENT PLATFORM.
WHAT OUR CLIENTS SAY.

We are proud of our new Token Management Platform that respects all regulatory and compliance requirements. Our cooperation with RIDDLE&CODE has enabled us to bypass the competition and to reaffirm our first-mover role in the area of blockchain banking services.

COO,
SWISS PRIVATE BANK

We’ve been looking for a secure and flexible way to store and manage digital assets. After a careful evaluation, we decided to try out RIDDLE&CODE’s Token Management Platform. We can say that it met all of our requirements and much more. What I like the most is that security, along with convenience, is the top priority.

All in all, it’s a great solution to keep your assets away from malicious attacks and scale your business at the same time.

COO,
DUTCH CRYPTO EXCHANGE
DEPLOYMENT OPTIONS.

Hosted by RIDDLE&CODE.

When you want the convenience of a hosted solution, RIDDLE&CODE offers the platform as a service deployed in distributed data centers in Austria with a “multi-tenant” capability to set up and secure environments for each client.

Confidential Hosting includes DIN/ISO IEC 27001 certified data centers, 24/7 monitoring of the entire infrastructure and Service Level Agreement (SLA) with various levels of support and service availability.

Hosted On-Premise.

The platform can also be hosted and operated by the client in his data center of choice with the capability to integrate existing HSMs for clients with higher regulatory requirements and needs.

TALK TO US FOR YOUR TAILOR-MADE INTEGRATION AND SETUP POSSIBILITIES.
COLLABORATIVE PARTNERS.

RIDDLE&CODE partners with Coinfirm—a global leader in RegTech for digital currencies and the blockchain-based financial ecosystem—to support regulatory compliance of the Token Management Platform.

RIDDLE&CODE partners with Securosys to integrate banking-grade HSM solutions from a market leader in cybersecurity, encryption and digital identity security.
SCHEDULE A DEMO OR CONTACT US WITH ALL INQUIRIES.

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