

Secure key creation and EVM based blockchains transactions through Luna HSM

3IPK, EVM-based Aerospace Toolset and UI for storing and transacting through Thales Luna HSM

The Problem

3IPK addresses security challenges in transitioning to Web 3.0, particularly for organizations like Aerospace with intricate supply chains, by introducing a cutting-edge European Enterprise Blockchain as a Service (BaaS). This service ensures the validation and security of transactions on the Ethereum Virtual Machine (EVM) blockchain through the Thales Luna Hardware Security Module (HSM).

The Aerospace sector, characterized by complexity and strict regulations, is highly susceptible to cyber threats, exacerbated by vast supply chain networks and the adoption of digital technologies like IoT and AI.

3IPK's BaaS (Blockchain As A Service) offers a secure and compliant path for Aerospace firms to embrace Web 3.0. It leverages key security features including the Thales Luna HSM, EVM blockchain, and European-based infrastructure to ensure data privacy compliance.

Key benefits for Aerospace organizations include enhanced security, regulatory compliance, scalability, and operational efficiency through process automation.

Use cases encompass supply chain management, manufacturing process optimization, and maintenance scheduling for asset reliability.

The Solution

The 3IPK EVM Solution offers a secure path for organizations entering Web 3.0. It employs the Thales Luna Hardware Security Module (HSM) for cryptographic key protection and relies on the Ethereum Virtual Machine (EVM) blockchain for security and scalability.

This solution yields several advantages:

1. Enhanced Security: Advanced security technologies shield organizations from cyber threats.
2. Compliance: Full adherence to data privacy regulations ensures legal conformity.
3. Scalability: Easily adapts to the requirements of both small and large organizations.
4. Efficiency: Streamlines processes and automates workflows, improving overall operational efficiency.

The versatile application of the 3IPK EVM Solution spans industries with complex supply chains, particularly those subject to stringent regulations:

- Supply Chain Management: Efficiently and securely tracks and manages complex supply chains.
- Manufacturing: Automates manufacturing processes and maintains quality control.
- Data Integrity: Ensures the integrity of data across intricate supply chains.
- Maintenance: Tracks and schedules asset maintenance, enhancing safety and reliability.
- Financial Transactions: Beyond manufacturing, it can be tailored to process financial transactions securely and cost-effectively.

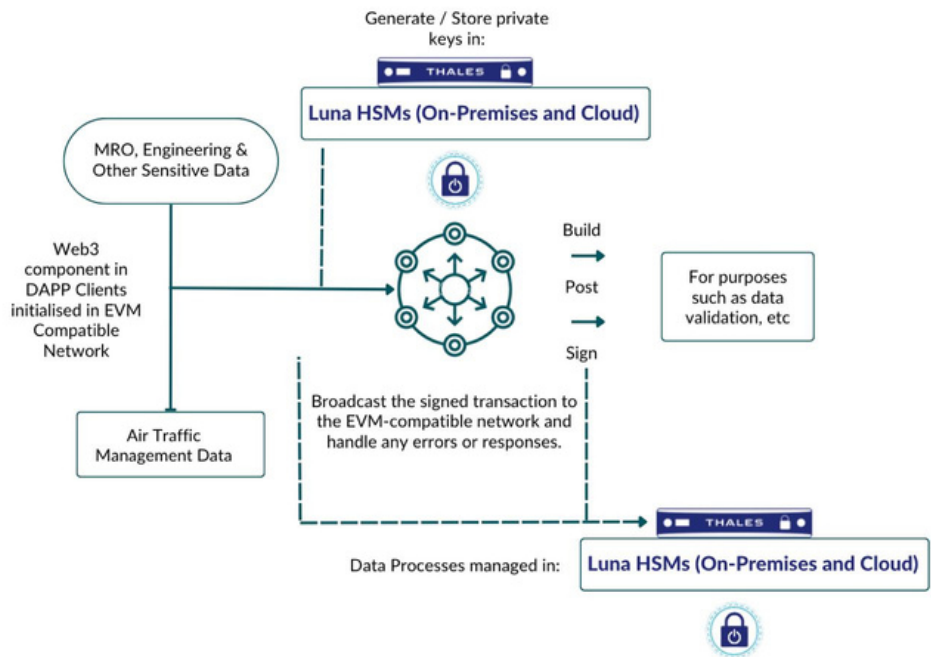
In a world rapidly transitioning to Web 3.0, the 3IPK EVM Solution serves as a versatile and secure tool for organizations, safeguarding data and operations in the digital age.

Solution Key Features

The 3IPK EVM Solution works by using the Thales Luna HSM to securely generate and store the private keys used to sign transactions on the EVM blockchain.

1. Securely create, store, and manage private keys using the Luna HSM SDK for transaction signing operations.
2. Initialize the web3 component with the desired EVM-compatible network (e.g., Ethereum, Avalanche), supporting both testnets and mainnets.
3. Prepare, sign, and construct blockchain transactions on the EVM using the Luna HSM SDK for secure key management and EVM interactions.

4. Efficiently broadcast signed transactions to the EVM-compatible network while managing any encountered errors or responses.
5. Provide an option for API endpoints in the backend to receive transaction data, including recipient addresses, amounts, and other relevant details.
6. Validate transactions on third-party EVM blockchain explorers like Avalanche SnowTrace.



Summary

3IPK has developed a comprehensive Enterprise Blockchain as a Service (BaaS) solution to address the security challenges faced by organizations transitioning to Web 3.0. Leveraging the Ethereum Virtual Machine (EVM) and Thales Luna Hardware Security Module (HSM), the solution offers secure key creation, transaction signing, and smart contract deployment. It enhances data security, promotes transparency, and streamlines processes like supply chain management in industries such as aerospace.

The EVM's interoperability and cost-effectiveness make it a preferred choice for developers. 3IPK's toolset, built on a Node.js backend, allows for seamless and secure blockchain transactions, complete with API endpoints for data sharing. The company, specializing in aerospace solutions, aims to revolutionize the industry by offering cutting-edge products and services, including those in Maintenance, Repair, and Overhaul (MRO), logistics, and Earth observation.