
Issue #35: Proposal for RFP: Private Credential Standard

Contact Information

Team Lead (Main Contact Person):

- **Name:** Mykyta Yefruiev
- **Position/Role:** Tech Lead at Unisoft
- **Email:** myf@unicsoft.com
- **GitHub Username:** <https://github.com/mykytayefruiev>
- **Mina Recipient Address (for potential funding):** TBD

Team Members:

1. **Member 1:**
 - **Name:** Artem Sklyarov
 - **Role:** Solution Architect, Back-end & Blockchain Developer
 - **Relevant Experience/Previous Work (with links):** 15+ years of experience with a strong focus on developing decentralized applications and blockchain solutions. Solution Architect and Lead developer on the digital asset boutique <https://www.teroxx.com/>
2. **Member 2:**
 - **Name:** Svitlana Razina
 - **Role:** Back-end Developer
 - **Relevant Experience/Previous Work (with links):** 10+ years of experience with Golang, NodeJS, PHP. Proficient in high-load microservice architectures and integrating third-party APIs including KYC services. Back-end developer on the digital asset boutique <https://www.teroxx.com/>

Team Overview

Our team is composed of highly experienced professionals in blockchain, front-end, and back-end development. Artem, as the lead developer, brings over a decade of expertise in blockchain solutions. Svitlana, our back-end developer, excels in designing high-load microservice architectures and integrating various APIs.

Proposed Solution

Proposed Solution Description: Our proposed solution aims to extend the wallet provider API for Mina wallets to enable attestations beyond current features. This will include the development of a Standardized Attestation Construction API, an Attestation Composition API, nullifier and expiration support for proofs, and secure proof storage. We will also provide example implementations demonstrating the API usage.

Step-by-Step Plan

1. **Develop Architecture (+UML):** 1 цуул
 - Create the overall architecture and UML diagrams for the project, ensuring a clear and structured plan for implementation.
2. **Implement Core Library Based on RFC-0008/RFC-0009:** 6 weeks
 - Develop the core library integrating with the Mina blockchain, providing a robust public API for attestations.
3. **Implement Core Integrated with Mina Blockchain, Providing Public API:** 4 weeks
 - Integrate the core library with the Mina blockchain, ensuring seamless interaction and availability of the public API.
4. **Implement DSL: Definition, Parser, Interpreter; Integrate:** 1 week
 - Define and implement the domain-specific language (DSL), including the parser and interpreter, and integrate it with the core library.
5. **Integrate Library with 3rd Party KYC Provider:** 2 weeks
 - Integrate the developed library with a third-party KYC provider to enhance functionality and compliance.
6. **Implement Integration Tests and Unit Tests:** 1 week
 - Develop comprehensive integration and unit tests to ensure the reliability and accuracy of the implemented features.
7. **Develop Test and Demo zkApps to Interact with the Provider API:** 2 weeks
 - Create test and demo zkApps to showcase the functionality and interaction with the Provider API, facilitating user understanding and adoption.
8. **Provide Documentation:** 2 weeks
 - Produce detailed documentation for the API and its usage, including guides and examples to support developers.
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Critical Milestones:

- Implement core library
- Implement API
- Release a test and demo zkApp to interact with the attestation API
- Documentation

Additional Support and Funding

Support Requirements:

- Technical support from the Mina Foundation for integrating with Mina wallets

Grant Funding:

- Development Breakdown:
 - Develop Architecture (+UML): \$1200
 - Implement Core Library Based on RFC-0008/RFC-0009: \$14000
 - Implement Core Integrated with Mina Blockchain, Providing Public API: \$7000
 - Implement DSL: \$2700
 - Integrate Library with 3rd Party KYC Provider: \$4700
 - Integration Tests: \$2500
 - Test and Demo zkApps: \$4200
 - Documentation: \$4000
 - Project coordination: \$4,500
- **Total:** \$44,800

Community Engagement

Engagement with Mina Community: Our team has actively engaged with the Mina community to refine this proposal. We participated in discussions and sought feedback to align our solution with community expectations. Our experience with Mina and the community enhances our project's potential for success.

Issue #18: Proposal for ZKPassport Implementation Project

Contact Information

Team Lead (Main Contact Person):

- **Name:** Mykyta Yefruiev
- **Position/Role:** Tech Lead at Unisoft
- **Email:** myf@unicsoft.com
- **GitHub Username:** <https://github.com/mykytayefruiev>
- **Mina Recipient Address (for potential funding):** TBD

Team Members:

1. **Member 1:**
 - **Name:** Artem Sklyarov
 - **Role:** Solution Architect, Back-end & Blockchain Developer
 - **Relevant Experience/Previous Work (with links):** 15+ years of experience with a strong focus on developing decentralized applications and blockchain solutions. Solution Architect and Lead developer on the digital asset boutique <https://www.teroxx.com/>
2. **Member 2:**
 - **Name:** Svitlana Razina
 - **Role:** Back-end Developer
 - **Relevant Experience/Previous Work (with links):** 10+ years of experience with Golang, NodeJS, PHP. Proficient in high-load microservice architectures and integrating third-party APIs including KYC services. Back-end developer on the digital asset boutique <https://www.teroxx.com/>
3. **Member 3:**
 - **Name:** Oleksandr Trityak
 - **Role:** Full-Stack Developer
 - **Relevant Experience/Previous Work:** 7 years of experience specializing in frontend and mobile development with React Native, React.js, Angular, and Vue.js. Skilled in building technical architectures and leading small teams. Experienced in designing and implementing blockchain-powered applications.

Team Overview

Our team consists of highly experienced professionals in blockchain development, backend, and frontend technologies. Artem, our team lead, has over a decade of experience in blockchain solutions and software development. Svitlana brings her expertise in backend development and high-load microservice architectures. Oleksandr is a versatile full-stack developer with extensive experience in both front-end and back-end development.

Proposed Solution

Proposed Solution Description: We propose to develop a cross-platform application leveraging NFC technology and zero-knowledge proofs (ZKPs) to scan and store passport information on the Mina blockchain securely. This application will provide a robust framework for decentralized identity verification while ensuring user privacy. The solution will involve developing the core library integrated with the Mina blockchain, implementing NFC and MRZ modules, and building a user-friendly interface.

Execution Plan

Step-by-Step Plan:

1. **Develop Architecture (+UML):** 1 week
 - Design the system architecture and create UML diagrams to outline the structure and interactions.
2. **Implement Core Library:** 6 weeks
 - Develop the core library, integrated with the Mina blockchain and off-chain storage, leveraging ZKP protocol.
3. **Implement NFC and MRZ Modules:** 3 weeks
 - Develop NFC (encrypted reading) and MRZ modules according to ICAO specifications.
4. **Implement User Interface:** 3 weeks
 - Build a demo user-friendly interface for both iOS and Android platforms.
5. **Integration and Unit Testing:** 2 weeks
 - Conduct thorough testing to ensure the application meets security and usability standards.
6. **Documentation:** 1 week
 - Provide comprehensive system architecture, core library, and user interface documentation.

Critical Milestones:

1. Completion of the NFC and MRZ modules.
2. Implementation of the core library.
3. Implementation of a demo user-friendly interface.
4. Comprehensive documentation and user manual.

Additional Support and Funding

Support Requirements:

- Technical support from the Mina Foundation is needed to integrate with the Mina wallet.

Grant Funding: We are requesting a total of \$23,850 - \$28,350 to cover the costs associated with the development, testing, and documentation of the zkPassport project. This funding will ensure that our team has the necessary resources to deliver a high-quality, secure, and user-friendly application.

Funding Breakdown:

- Development Breakdown
 - Develop Architecture (+UML): \$1200

- Implement Core Library: \$13,000
- Implement NFC and MRZ Modules: \$8,000
- Implement User Interface: \$6,500
- Integration and Unit Testing: \$3,700
- Documentation: \$2,500
- Project coordination: \$4,000
- **Total:** \$38,900

Community Engagement

Engagement with Mina Community: Our team has actively engaged with the Mina community to refine this proposal. We participated in discussions and sought feedback to align our solution with community expectations. Our experience with Mina and the community enhances our project's potential for success.