

Reputation & Voting Weight System

DFR4-RFPD2

Milestone 3 Report



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Executive Summary

The reputation and voting weight system project, initiated by SingularityNet's Deep Funding program, is an effort to design a community decision system that enhances the quality of the investments made by the SingularityNET ecosystem. The goal is to reinforce the integrity of the ecosystem while ensuring that community-driven contributions and decision-making align with strategic goals. The Photrek team was initially focused on refining system architecture, defining high-level requirements for microservices to collect and export important data, and outlining functionality desired in the user interface for this system. Current work focuses on developing an RFP for research on decentralized identity (DID) methods and a DID hub for the SNET community. Additional work will focus on creating detailed product requirements documents, outlining a roadmap for future enhancements, and outlining research and suggestions for potential updates to the existing Knowledge Graph based on evolving system needs. This effort represents steps toward designing and implementing a system that will allow voting systems in SingularityNET to account for a variety of contributions and forms of participation from SingularityNET community members that can be taken into account as weighting mechanisms in community decision-making.

Introduction

Milestone 3 includes the results of our efforts to create an RFP for research on an SNET DID hub that can be used as part of a reputation and voting weight system. The highlight of this milestone includes the successful creation of the RFP alongside associated work defining requirements and expectations for the research output. This includes requirements for research on existing DID solutions, solutions and standards for DID integration, requirements for a DID integration hub, methods to ensure privacy, and techniques to prevent multiple identities for a single user for Sybil resistance. This gives us confidence in the RFP to generate valuable and insightful research that can be used to help gauge the requirements and feasibility of developing a DID hub for SNET and provide guidance on how such a DID hub should function.

Milestone Objectives

Milestone Description:

Defining the high-level requirements for research into DID methods, DID integration, and a DID Hub for the SNET community.

Deliverable Description:

- An RFP outlining requirements for research:
 - Identification of requirements for a DID hub capable of integrating existing DID solutions
 - Consideration of existing DID solutions and the ability to integrate unique features
 - Identification of standards and existing solutions for DID integration
 - Considerations of expanding WaLT to serve as a foundation of the DID hub
 - Methods to prevent the use of multiple identities for a single user
 - Methods to allow self-sovereign control and maintain privacy for users
 - Consideration of security and potential vulnerabilities
 - Details of methodology, data collection, analysis, and findings

Milestone Accomplishments

Objective: Develop an RFP outlining the requirements for research into a DID hub for the SNET community, including a focus on existing DID methods, DID integration, privacy preservation, and Sybil resistance.

Accomplishment: The Photrek team was able to successfully create an RFP for research on an SNET DID hub. This includes high level requirements for research on existing DID solutions, DID integration, expansion of WaLT for the DID hub, privacy preservation, security, and Sybil resistance. This also includes research on a modular architecture for the DID that can allow for the integration of future DID solutions that may be developed.

Milestone output: [SNET DF4 - RFP - M3](#)

Budget & Schedule

Milestone	Description	Budget	Status
1	Project Kick-off / Community Workshop / Architecture Design	\$4,450	Submitted - October 18th 2024
2	Microservices Architecture and Layer RFP	\$6,300	Submitted - December 19th 2024
3	Decentralized Identity (DID) research RFP	\$6,540	Submitted - January 02 2024
4	Product Requirements, Roadmap, and Knowledge Graph Enhancements	\$7,710	

Future Plans & Change Notifications

With the submission of milestone 3, we are on track to complete the remaining milestone 4.

References

- RFP: [SNET DF4 - RFP - M3](#)
-  DF- Preserving privacy in Reputation calculations