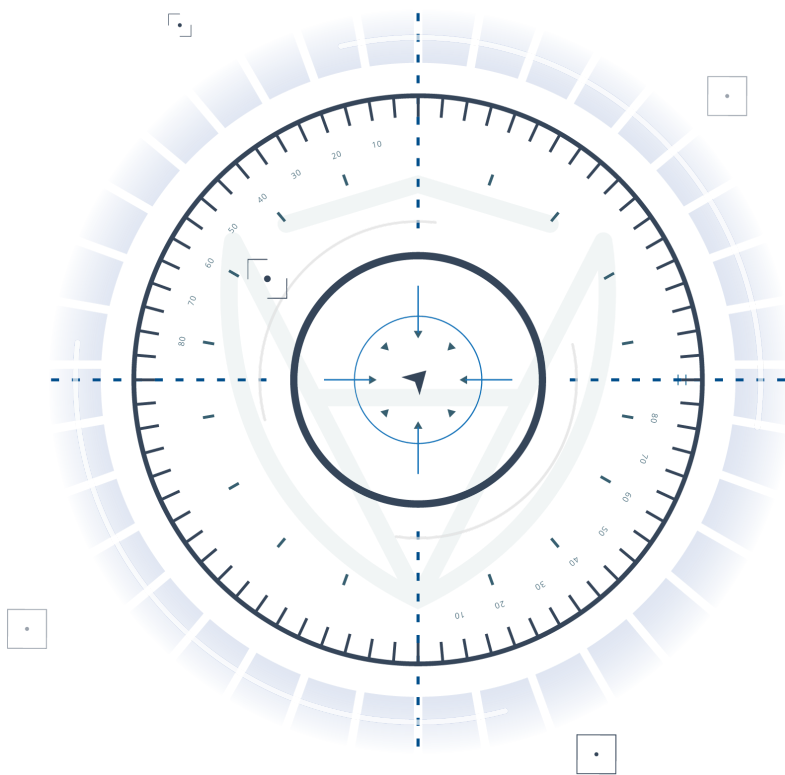


Quiver

Skynet Scanning Report

May 20th, 2021





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Summary

This report is based on the results from CertiK Skynet Scanning, a proprietary security service that leverages automated scanning technologies to check smart contracts against a wide range of known vulnerabilities. Clients could reference the content to reason about the security score calculations. Automated static analysis can cover a wide range of known security issues and vulnerabilities, yet a full security assessment by security experts is always recommended to cover potential security concerns at business levels.

Scope of Works

The nature of CertiK Skynet is to provide real-time security intelligence, and scanning based on static analysis tool sets is one of the 6 Security Primitives. In summary:

1. Smart contracts run against CertiK's in-house tool chains (together with open source libraries for cross-checking purposes);
2. Manual efforts involved in reviewing the scanning outputs and filter out false alarms. We map scanning results into SWCs for better categorizing and we encourage the development team of the projects to visit the website and follow the recommendations: <https://swc-registry.certik.foundation/>;
3. Manual efforts on a high level walkthrough of code logics to better understand the project and its intentions that may benefit a future full security assessment.

Scanning Results

Primitive Scores

Source-code Score | 92.57

- QAirdrop | 89
- QRep | 95
- QSettings | 99
- QStk | 99
- QNFT/QNFT | 85
- QNFT/QNFTGov | 88
- QNFT/QNFTSettings | 93

Smart Contracts

- [QAirdrop](#)
- [QRep](#)
- [QSettings](#)
- [QStk](#)
- [QNFT](#)
- [QNFTGov](#)
- [QNFTSettings](#)

Source-code Primitive Results

In summary, 3 issues were found out of 33 checks for [QAirdrop](#).

SWC-119	-5 pts
Title	Shadowing State Variables
Contract	QAirdrop
Location	Line#184

SWC-107	-5 pts
Title	Reentrancy
Contract	QAirdrop
Location	Line#84-107, 109-143

SWC-CTK-68	-1 pts
Title	Improper Input Validation
Contract	QAirdrop
Location	Line#53, 75

In summary, 1 issue was found out of 33 checks for QRep.

SWC-119	-5 pts
Title	Shadowing State Variables
Contract	QRep
Location	Line#130

In summary, 1 issue was found out of 33 checks for QSettings.

SWC-CTK-68	-1 pts
Title	Improper Input Validation
Contract	QSettings

Location	Line#25, 26, 40
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In summary, 1 issue was found out of 33 checks for QStk.

SWC-CTK-46	-1 pts
Title	Shadowing Local Variables
Contract	QStk
Location	Line#21

In summary, 3 issues were found out of 33 checks for QNFT.

SWC-CTK-32	-5 pts
Title	Arbitrary Ether Send
Contract	QNFT
Location	Line#393, 401

SWC-107	-5 pts
Title	Reentrancy
Contract	QNFT
Location	Line#283-306, 310-385, 414-432

SWC-119	-5 pts
Title	Shadowing State Variables

Contract	QNFT
Location	Line#446

In summary, 4 issues were found out of 33 checks for [QNFTGov](#).

SWC-CTK-32	-5 pts
Title	Arbitrary Ether Send
Contract	QNFTGov
Location	Line#122

SWC-119	-5 pts
Title	Shadowing State Variables
Contract	QNFTGov
Location	Line#201

SWC-CTK-68	-1 pts
Title	Improper Input Validation
Contract	QNFTGov
Location	Line#140

SWC-120	-1 pts
Title	Block Timestamps

Contract	QNFTGov
Location	Line#195, 196-197

In summary, 3 issues were found out of 33 checks for [QNFTSettings](#).

SWC-119	-5 pts
Title	Shadowing State Variables
Contract	QNFTSettings
Location	Line#535

SWC-CTK-41	-1 pts
Title	Imprecise Arithmetic Operations Order
Contract	QNFTSettings
Location	Line#418-423, 424

SWC-120	-1 pts
Title	Block Timestamps
Contract	QNFTSettings
Location	Line#474, 487-490, 502-505, 524

Disclaimer

Skynet Scanning could be leveraged as an automated toolset, however, it cannot replace a formal full security assessment, the toolset is best used synergistically alongside a full formal security audit. Security experts are extremely important in analyzing complex business logic and unknown vulnerabilities specific to each organization. QuickScan is a proprietary CertiK service, offered exclusively to existing and potential clients.

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About CertiK

Founded in 2017 by leading academics in the field of Computer Science from both Yale and Columbia University, CertiK is a leading blockchain security company that serves to verify the security and correctness of smart contracts and blockchain-based protocols. . Through the utilization of our world-class technical expertise, alongside our proprietary, innovative tech, we're able to support the success of our clients with best-in-class security, all whilst realizing our overarching vision; provable trust for all throughout all facets of blockchain.

