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AUDITING REPORT

Version Notes

Version	No. Pages	Date	Revised By	Notes
1.0	Total: 14	2022-02-07	Zapmore, Plemonade	Audit Final

Audit Notes

Audit Date	2022-01-22 - 2022-01-07
Auditor/Auditors	Plemonade, ByFixter
Auditor/Auditors Contact Information	contact@obeliskauditing.com
Notes	Specified code and contracts are audited for security flaws. UI/UX (website), logic, team, and tokenomics are not audited.
Audit Report Number	OB511241259

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Obelisk Auditing

Defi is a relatively new concept but has seen exponential growth to a point where there is a multitude of new projects created every day. In a fast-paced world like this, there will also be an enormous amount of scams. The scams have become so elaborate that it's hard for the common investor to trust a project, even though it could be legit. We saw a need for creating high-quality audits at a fast phase to keep up with the constantly expanding market. With the Obelisk stamp of approval, a legitimate project can easily grow its user base exponentially in a world where trust means everything. Obelisk Auditing consists of a group of security experts that specialize in security and structural operations, with previous work experience from among other things, PricewaterhouseCoopers. All our audits will always be conducted by at least two independent auditors for maximum security and professionalism.

As a comprehensive security firm, Obelisk provides all kinds of audits and project assistance.

Audit Information

The auditors always conducted a manual visual inspection of the code to find security flaws that automatic tests would not find. Comprehensive tests are also conducted in a specific test environment that utilizes exact copies of the published contract.

While conducting the audit, the Obelisk security team uses best practices to ensure that the reviewed contracts are thoroughly examined against all angles of attack. This is done by evaluating the codebase and whether it gives rise to significant risks. During the audit, Obelisk assesses the risks and assigns a risk level to each section together with an explanatory comment. Take note that the comments from the project team are their opinion and not the opinion of Obelisk.

Table of Contents

Project Information

Name	Quoth
Description	SEARCH AND AUTHENTICATE ANY NFT An all-chain NFT authentication oracle complete with AI and ML search, mint and bridge SDKs and APIs
Website	https://quoth.ai/
Contact	https://twitter.com/Quoth_ai
Contact information	@DeFiVlad on TG
Token Name(s)	N/A
Token Short	N/A
Contract(s)	See Appendix A
Code Language	Solidity
Chain	Multiple

Audit of Quoth Token

The contract has no security issues.

Obelisk was commissioned by Quoth on the 19th of January 2022 to conduct a comprehensive audit of Quoths' contracts. The following audit was conducted between the 22nd of January 2022 and the 4th of February 2022. Two of Obelisk's security experts went through the related contracts manually using industry standards to find if any vulnerabilities could be exploited either by the project team or users.

The contract has no security issues. However keep in mind that all tokens are minted to one single address which currently holds all tokens. As Obelisk hasn't audited any other Quoth contract, we can't confirm their Quoth IDO plans through contracts.

The informational findings are good to know while interacting with the project but don't directly damage the project in its current state, hence it's up to the project team if they deem that it's worth solving these issues.

The team has not reviewed the UI/UX, logic, team, or tokenomics of the Quoth project**.**

Please read the full document for a complete understanding of the audit.

Summary Table

Finding	ID	Severity	Status
Entire Supply Is Minted To One Address	#0001	Low Risk	Open

Findings

Manual Analysis

Entire Supply Is Minted To One Address

FINDING ID	#0001
SEVERITY	Low Risk
STATUS	Open
LOCATION	QuothToken.sol -> 8-16

```
constructor(
  string memory name_,
  string memory symbol_,
  address recipient_,
  uint256 amount_
) ERC20(name_, symbol_) {
  require(amount_ > 0, "QuothToken: Amount is zero");
  _mint(recipient_, amount_);
}
```

DESCRIPTION	Note that the whole token supply is minted to one address. The token website states that there will be an IDO and that some token holders will be vested https://quoth.ai/0x/Links/QuothVestingExpanded.pdf. As no other contract has been provided Obelisk assumes that an EOA (externally owned address) will handle the whole token supply and distribute it.
RECOMMENDATION	The distribution model on the website states that some token holders will be vested over time. Deploy a smart contract to handle the vested tokens.
RESOLUTION	N/A

Static Analysis

No Findings

On-Chain Analysis

Contract Not Deployed

Appendix A - Reviewed Documents

Document	**Address**
QuothToken.sol	N/A

Revisions

Revision 1	cc8feb059f3ed48c0356af4e80e86022f6a36e00

Imported Contracts

Contracts	Version

Externally Owned Accounts

Account	Address

External Contracts

These contracts are not part of the audit scope.

Contract	Address

Appendix B - Risk Ratings

Risk	Description
High Risk	A fatal vulnerability that can cause the loss of all Tokens / Funds.
Medium Risk	A vulnerability that can cause the loss of some Tokens / Funds.
Low Risk	A vulnerability which can cause the loss of protocol functionality.
Informational	Non-security issues such as functionality, style, and convention.

Appendix C - Finding Statuses

Closed	Contracts were modified to permanently resolve the finding.
Mitigated	The finding was resolved by other methods such as revoking contract ownership. The issue may require monitoring, for example in the case of a time lock.
Partially Closed	Contracts were updated to fix the issue in some parts of the code.
Partially Mitigated	Fixed by project specific methods which cannot be verified on chain. Examples include compounding at a given frequency.
Open	The finding was not addressed.

Appendix D - Audit Procedure

A typical Obelisk audit uses a combination of the three following methods:

Manual analysis consists of a direct inspection of the contracts to identify any security issues. Obelisk auditors use their experience in software development to spot vulnerabilities. Their familiarity with common contracts allows them to identify a wide range of issues in both forked contracts as well as original code.

Static analysis is software analysis of the contracts. Such analysis is called “static” as it examines the code outside of a runtime environment. Static analysis is a powerful tool used by auditors to identify subtle issues and to verify the results of manual analysis.

On-chain analysis is the audit of the contracts as they are deployed on the block-chain. This procedure verifies that:

- deployed contracts match those which were audited in manual/static analysis;
- contract values are set to reasonable values;
- contracts are connected so that interdependent contract function correctly;
- and the ability to modify contract values is restricted via a timelock or DAO mechanism. (We recommend a timelock value of at least 72 hours)

Each obelisk audit is performed by at least two independent auditors who perform their analysis separately.

After the analysis is complete, the auditors will make recommendations for each issue based on best practice and industry standards. The project team can then resolve the issues, and the auditors will verify that the issues have been resolved with no new issues introduced.

Our auditing method lays a particular focus on the following important concepts:

- Quality code and the use of best practices, industry standards, and thoroughly tested libraries.
- Testing the contract from different angles to ensure that it works under a multitude of circumstances.
- Referencing the contracts through databases of common security flaws.

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