auditace.tech

AuditAce
FROM INCEPTION TO SUCCESS

Smart Contract Audit

FOR

BitcoinETFToken

DATED : 05 Dec 23'

AUDIT SUMMARY

Project name – BitcoinETFToken

Date: 05 Dec, 2023

Scope of Audit- Audit Ace was consulted to conduct the smart contract audit of the solidity source codes.

Audit Status: Passed

Issues Found

Status	Critical	High	Medium	Low	Suggestion
Open	0	0	0	0	1
Acknowledged	0	0	0	0	0
Resolved	0	0	0	0	0

USED TOOLS

Tools:

1- Manual Review:
A line by line code review has been performed by audit ace team.

2- BSC Test Network: All tests were conducted on the BSC Test network, and each test has a corresponding transaction attached to it. These tests can be found in the "Functional Tests" section of the report.

3- Slither :
The code has undergone static analysis using Slither.

Testnet version:
The tests were performed using the contract deployed on the BSC Testnet, which can be found at the following address:
https://testnet.bscscan.com/address/0x871ca261a6c3bccb97c647a17e1cb77b7d5f3010#code

Token Information

Token Address:
0xBEd2BB4Cd4717e4D62Ac17343041076aD3f7407e

Symbol: BTCETF

Decimals: 18

Network: Etherscan

Token Type: ERC-20

Owner: 0x8fE091c76D372204715D1819747cb4b41baDD49C

Deployer: 0x8fE091c76D372204715D1819747cb4b41baDD49C

Token Supply: 100000000000000000000000000

Checksum: ff126dac9919ad76433d7e81ee6d9b99

Testnet:
https://testnet.bscscan.com/address/0x871ca261a6c3bccb97c647a17e1cb77b7d5f3010#code

TOKEN OVERVIEW

Buy Fee: 0-5%

Sell Fee: 0-5%

Transfer Fee: 0-0%

Fee Privilege: Owner

Ownership: Owned

Minting: None

Max Tx: Yes

Blacklist: No

AUDIT METHODOLOGY

The auditing process will follow a routine as special considerations by Auditace:

- Review of the specifications, sources, and instructions provided to Auditace to make sure the contract logic meets the intentions of the client without exposing the user's funds to risk.
- Manual review of the entire codebase by our experts, which is the process of reading source code line-by-line in an attempt to identify potential vulnerabilities.
- Specification comparison is the process of checking whether the code does what the specifications, sources, and instructions provided to Auditace describe.
- Test coverage analysis determines whether the test cases are covering the code and how much code isexercised when we run the test cases.
- Symbolic execution is analysing a program to determine what inputs cause each part of a program to execute.
- Reviewing the codebase to improve maintainability, security, and control based on the established industry and academic practices.

VULNERABILITY CHECKLIST

- [x] Return values of low-level calls
- [x] Private modifier
- [x] Multiple Sends
- [x] Using Suicide
- [x] Gas Limitand Loops
- [x] Address hardcoded
- [x] Exception Disorder
- [x] Using inline assembly
- [x] Divide before multiply
- [x] Missing Zero Address Validation
- [x] Compiler version not fixed
- [x] **Gasless Send**
- [x] Using block.timestamp
- [x] Re-entrancy
- [x] Tautology or contradiction
- [x] Timestamp Dependence
- [x] Revert/require functions
- [x] Use of tx.origin
- [x] Integer overflow/underflow
- [x] Dangerous strict equalities
- [x] Using SHA3
- [x] Using throw

CLASSIFICATION OF RISK

Severity	Description
Critical	These vulnerabilities could be exploited easily and can lead to asset loss, data loss, asset, or data manipulation. They should be fixed right away.
High-Risk	A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.
Medium-Risk	A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.
Low-Risk	A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.
Gas Optimization /Suggestion	A vulnerability that has an informational character but is not affecting any of the code.

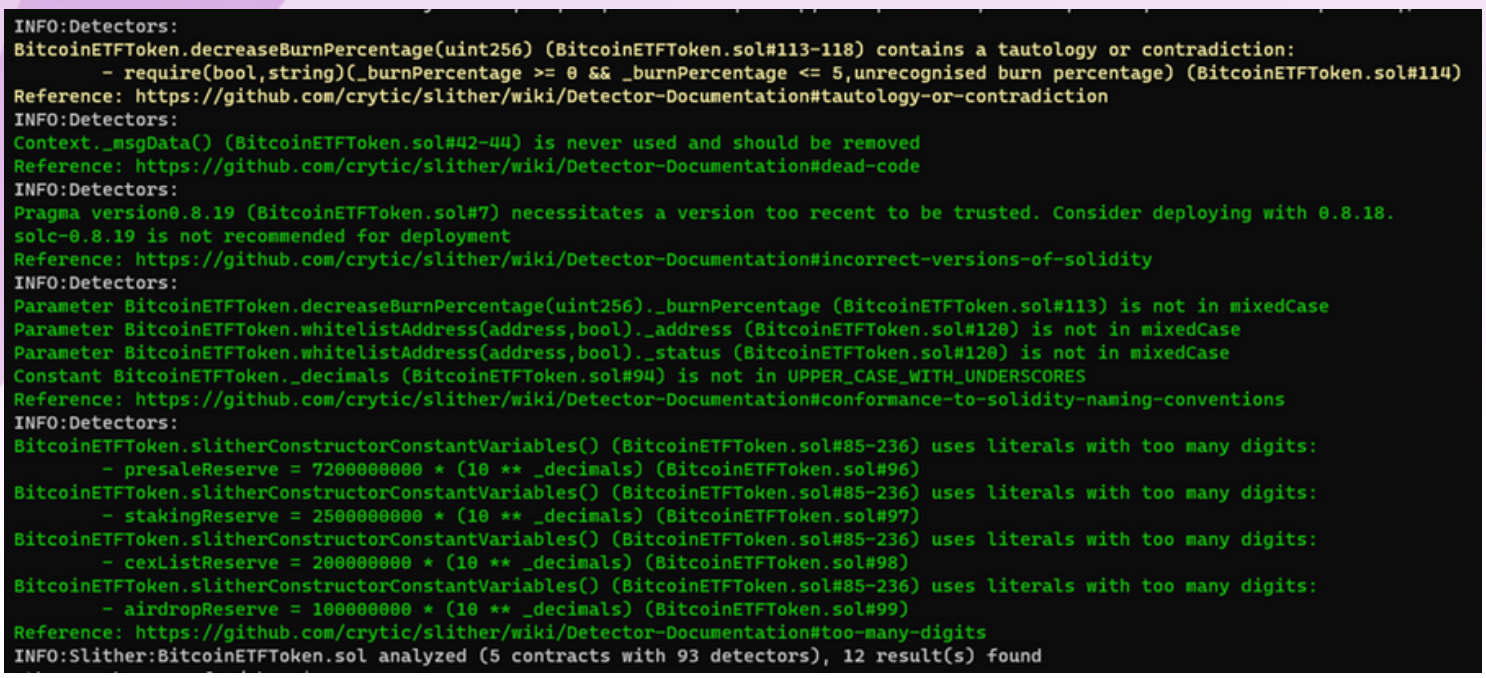
Findings

Severity	Found
Critical	0
High-Risk	0
Medium-Risk	0
Low-Risk	0
Gas Optimization / Suggestions	1

POINTS TO NOTE

- The owner can renounce the ownership.
- The owner can transfer ownership.
- The owner can change the marketing wallet address.
- The owner can set buy and sell fees of not more than 5%.
- The owner can Include/exclude the address from fees.

STATIC ANALYSIS



```
INFO:Detectors:
BitcoinETFToken.decreaseBurnPercentage(uint256) (BitcoinETFToken.sol#113-118) contains a tautology or contradiction:
        - require(bool,string)(_burnPercentage >= 0 && _burnPercentage <= 5,unrecognised burn percentage) (BitcoinETFToken.sol#114)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#tautology-or-contradiction
INFO:Detectors:
Context._msgData() (BitcoinETFToken.sol#42-44) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code
INFO:Detectors:
Pragma version0.8.19 (BitcoinETFToken.sol#7) necessitates a version too recent to be trusted. Consider deploying with 0.8.18.
solc-0.8.19 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity
INFO:Detectors:
Parameter BitcoinETFToken.decreaseBurnPercentage(uint256)._burnPercentage (BitcoinETFToken.sol#113) is not in mixedCase
Parameter BitcoinETFToken.whitelistAddress(address,bool)._address (BitcoinETFToken.sol#120) is not in mixedCase
Parameter BitcoinETFToken.whitelistAddress(address,bool)._status (BitcoinETFToken.sol#120) is not in mixedCase
Constant BitcoinETFToken._decimals (BitcoinETFToken.sol#94) is not in UPPER_CASE_WITH_UNDERSCORES
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions
INFO:Detectors:
BitcoinETFToken.slitherConstructorConstantVariables() (BitcoinETFToken.sol#85-236) uses literals with too many digits:
        - presaleReserve = 7200000000 * (10 ** _decimals) (BitcoinETFToken.sol#96)
BitcoinETFToken.slitherConstructorConstantVariables() (BitcoinETFToken.sol#85-236) uses literals with too many digits:
        - stakingReserve = 2500000000 * (10 ** _decimals) (BitcoinETFToken.sol#97)
BitcoinETFToken.slitherConstructorConstantVariables() (BitcoinETFToken.sol#85-236) uses literals with too many digits:
        - cexListReserve = 200000000 * (10 ** _decimals) (BitcoinETFToken.sol#98)
BitcoinETFToken.slitherConstructorConstantVariables() (BitcoinETFToken.sol#85-236) uses literals with too many digits:
        - airdropReserve = 100000000 * (10 ** _decimals) (BitcoinETFToken.sol#99)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#too-many-digits
INFO:Slither:BitcoinETFToken.sol analyzed (5 contracts with 93 detectors), 12 result(s) found
```

Result => A static analysis of contract's source code has been performed using slither,

No major issues were found in the output

FUNCTIONAL TESTING

1- Approve (passed):

https://testnet.bscscan.com/tx/0xda92a5d53f36e12bef9ba772389fe098d55bc3da34ed543523bc29aa93f30202

2- Increase Allowance (passed):

https://testnet.bscscan.com/tx/0xc7eb3f3e1e55080220caa58713458f9f52e837e39eb9e381d8a1ab92ad95e42c

3- Decrease Allowance (passed):

https://testnet.bscscan.com/tx/0x767d3e80721cea6454d01fccc876f59729003e4020b48548e63b556a6f60eb15

4- Decrease Burn Percentage (passed):

https://testnet.bscscan.com/tx/0x85dfc2f1ed74eaf20ae90ecd1c322ef4317855c8dfae95dc92bb237ccc505f50

5- Whitelist Address (passed):

https://testnet.bscscan.com/tx/0x78b83130b2ccf7fe7679f91996f7ddf2f9979be5c10f2a0fe701ef409a058bdf

MANUAL TESTING

Optimization

Severity: Informational

subject: Remove unused code.

Status: Open

Overview:

Unused variables are allowed in Solidity, and they do. not pose a direct security issue. It is the best practice. though to avoid them.

```
function _msgData() internal view virtual returns (bytes calldata) {
  return msg.data;
 }
```

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