

Smart contracts security assessment

Final report ariff: Standard

Sundog





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Introduction

In accordance with the Memtember initiative, the Sundog project was selected and subjected to an audit. The Memtember campaign, designed to foster innovation and community engagement within the blockchain ecosystem, sought to identify promising projects that align with the initiative's core values.

The Sundog is standard ERC20 token implemented with OpenZeppelin library which is considered as a best practice. After deployment transfers are blocked. The owner of the contract may allow transfers to and from owner account and open transfers for all token holders. Once transfers are open for all holders, transfer restrictions can't be set back.

Name	Sundog	
Audit date	2024-09-06 - 2024-09-06	
Language	Solidity	
Platform	TRON	

Contracts checked

Name	Address
Token	TXL6rJbvmjD46zeN1JssfgxvSo99qC8MRT

Procedure

We perform our audit according to the following procedure:

Automated analysis

- Scanning the project's smart contracts with several publicly available automated Solidity analysis tools
- Manual verification (reject or confirm) all the issues found by the tools

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Manual audit

- Manually analyze smart contracts for security vulnerabilities
- Smart contracts' logic check

Known vulnerabilities checked

Title	Check result
Unencrypted Private Data On-Chain	passed
Code With No Effects	passed
Message call with hardcoded gas amount	passed
Typographical Error	passed
DoS With Block Gas Limit	passed
Presence of unused variables	passed
Incorrect Inheritance Order	passed
Requirement Violation	passed
Weak Sources of Randomness from Chain Attributes	passed
Shadowing State Variables	passed
Incorrect Constructor Name	passed
Block values as a proxy for time	passed
Authorization through tx.origin	passed
DoS with Failed Call	passed
Delegatecall to Untrusted Callee	passed
Use of Deprecated Solidity Functions	passed
Assert Violation	passed
State Variable Default Visibility	passed



Reentrancy passed Unprotected SELFDESTRUCT Instruction passed **Unprotected Ether Withdrawal** passed Unchecked Call Return Value passed Floating Pragma passed **Outdated Compiler Version** passed Integer Overflow and Underflow passed **Function Default Visibility** passed

Classification of issue severity

High severity High severity issues can cause a significant or full loss of funds, change

of contract ownership, major interference with contract logic. Such issues

require immediate attention.

Medium severity Medium severity issues do not pose an immediate risk, but can be

detrimental to the client's reputation if exploited. Medium severity issues may lead to a contract failure and can be fixed by modifying the contract

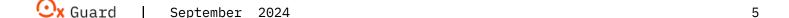
state or redeployment. Such issues require attention.

Low severity Low severity issues do not cause significant destruction to the contract's

functionality. Such issues are recommended to be taken into

consideration.

Issues



High severity issues

No issues were found

Medium severity issues

No issues were found

Low severity issues

1. Lack of events (Token)

Status: Open

The function setMode() changes token transfer restrictions but does not emit any events.

```
function setMode(uint v) public onlyOwner {
   if (_mode != MODE_NORMAL) {
      _mode = v;
   }
}
```

Recommendation: Create and emit event SetMode (uint mode) in the function.



○ Conclusion

Sundog Token contract was audited. 1 low severity issue was found.

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