



Smart Contract Security Audit Report

PIRROT GAME

December 2022

Security Status



www.hacksafe.io



Audit Details



Audited project

PIRROT GAME



Deployer address

0x78da04dc41ab1fb78dae9119fa6f69b15a8a2419



Client contacts

PIRROT GAME Team



Blockchain

Binance smart chain



Website

Not provided

Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the below disclaimer below – please make sure to read it in full.

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The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

Procedure

Step 1 - In-Depth Manual Review

Manual line-by-line code reviews to ensure the logic behind each function is sound and safe from various attack vectors. This is the most important and lengthy portion of the audit process (as automated tools often cannot find the nuances that lead to exploits such as flash loan attacks).

Step 2 - Automated Testing

Simulation of a variety of interactions with your Smart Contract on a test blockchain leveraging a combination of automated test tools and manual testing to determine if any security vulnerabilities exist.

Step 3 – Leadership Review

The engineers assigned to the audit will schedule meetings with our leadership team to review the contracts, any comments or findings, and ask questions to further apply adversarial thinking to discuss less common attack vectors.

Step 4 - Resolution of Issues

Consulting with the team to provide our recommendations to ensure the code's security and optimize its gas efficiency, if possible. We assist project team's in resolving any outstanding issues or implementing our recommendations.

Step 5 - Published Audit Report

Boiling down results and findings into an easy-to-read report tailored to the project. Our audit reports highlight resolved issues and any risks that exist to the project or its users, along with any remaining suggested remediation measures. Diagrams are included at the end of each report to help users understand the interactions which occur within the project.

Background

HackSafe was commissioned by PIRROT GAME to perform an audit of smart contracts:

- <https://bscscan.com/token/0x7024d100e22D314C5dAAEcA4cF69a51CDD5ED7C1#code>

The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

The information in this report should be understand the risk exposure of the smart contract, and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

Contract Details

Token contract details for 09.12.2022

Token Type	: Gaming
Contract name	: StandardToken
Contract address	: 0x7024d100e22D314C5dAAEcA4cF69a51CDD5ED7C1
Total supply	: 500,000,000
Token ticker	: PRG
Decimals	: 9
Token Holders	: 193
Transactions count	: 2,407
Compiler version	: v0.8.4+commit.c7e474f2
Contract deployer address	: 0x78da04dc41ab1fb78dae9119fa6f69b15a8a2419
Owner address	: 0x78da04dc41ab1fb78dae9119fa6f69b15a8a2419

Audit Summary

According to the standard audit assessment, Customer`s solidity smart contracts are **“Well Secure”**. This token contract does contain owner control, which do not make it fully decentralized but owner does not have control over smart contract as there are o any other functions which is being controlled by owner.

Insecure	Poor secured	Secure	Well-secured
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We used various tools like Slither, Mythril and Remix IDE. At the same time this finding is based on critical analysis of the manual audit. All issues found during automated analysis were manually reviewed and applicable vulnerabilities are presented in the issues checking status.

We found 0 critical, 0 high, 0 medium and 0 low.

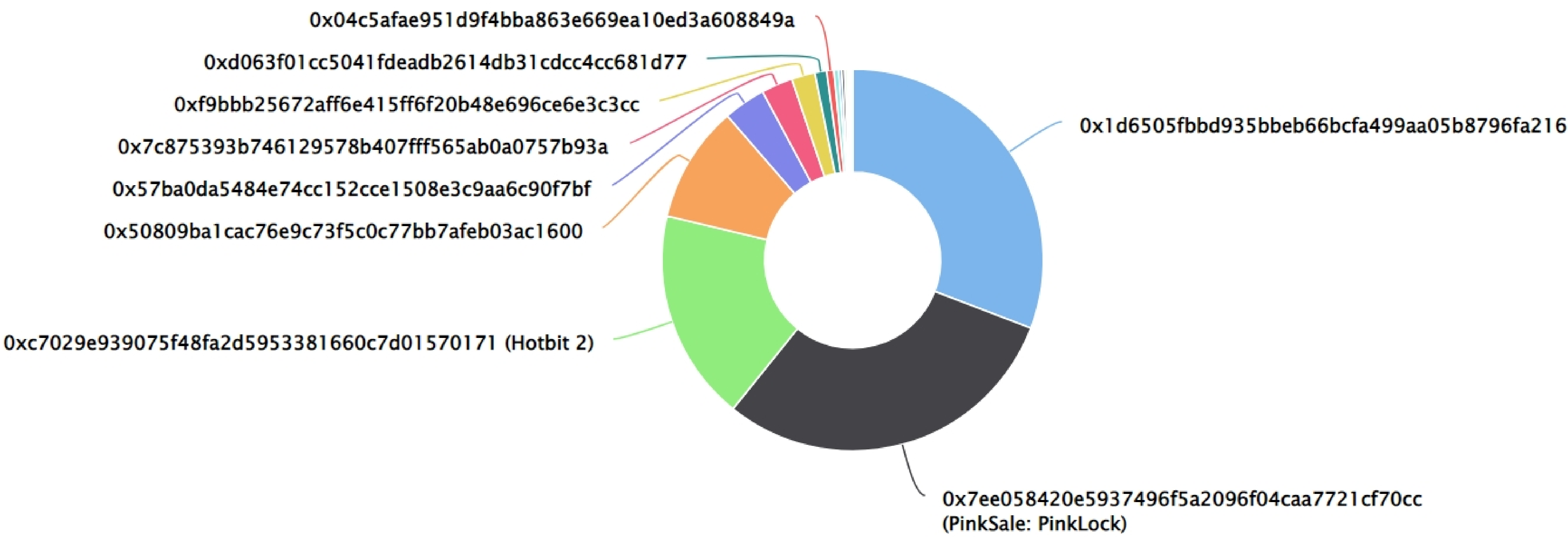
PIRROT GAME Token Distribution

💡 The top 100 holders collectively own 100.00% (499,996,087.61 Tokens) of PIRROT GAME

💡 Token Total Supply: 500,000,000.00 Token | Total Token Holders: 193




PIRROT GAME Top 100 Token Holders

Source: BscScan.com



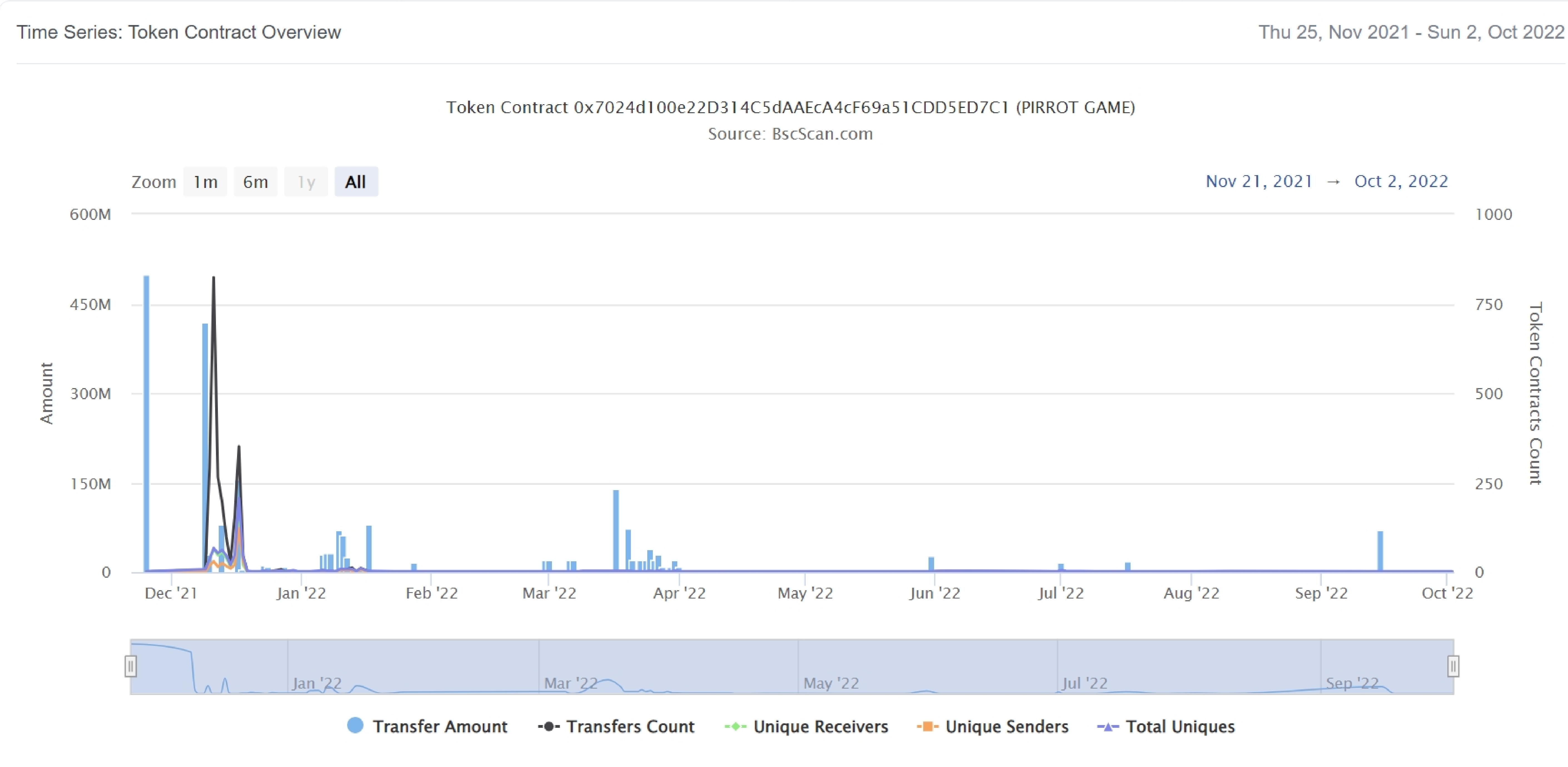
PIRROT GAME Top 20 Token Holders

(A total of 499,996,087.61 tokens held by the top 100 accounts from the total supply of 500,000,000.00 token)

Rank	Address	Quantity (Token)	Percentage
1	0x1d6505fbbd935bbeb66bcfa499aa05b8796fa216	154,007,490	30.8015%
2	 PinkSale: PinkLock	150,000,000	30.0000%
3	Hotbit 2	89,567,846.322014416	17.9136%
4	 0x50809ba1cac76e9c73f5c0c77bb7afeb03ac1600	49,513,901.866666031	9.9028%
5	0x57ba0da5484e74cc152cce1508e3c9aa6c90f7bf	17,810,638	3.5621%
6	0x7c875393b746129578b407fff565ab0a0757b93a	13,261,808	2.6524%
7	0xf9bbb25672aff6e415ff6f20b48e696ce6e3c3cc	10,000,503	2.0001%
8	0xd063f01cc5041fdeadb2614db31cdcc4cc681d77	5,000,000	1.0000%
9	0x04c5afae951d9f4bba863e669ea10ed3a608849a	2,999,600	0.5999%
10	0xe2bbfdadcf4c79d4f8b59def2965186bdd50aa91	2,016,488	0.4033%
11	0x707df7d39a52aa94fe8d4f3ca126f5af0d596c0a	1,276,091	0.2552%
12	0xbb42c5d512ce1c795ecf76539c86058b83cbff35	1,234,567	0.2469%
13	0x6b824633defe1a53f993682f5c5c8bdb978fdc1c	993,887	0.1988%
14	0x78da04dc41ab1fb78dae9119fa6f69b15a8a2419	548,073.5	0.1096%
15	 0x7024d100e22d314c5daaeca4cf69a51cdd5ed7c1	534,860	0.1070%
16	0x7941e8dc544c92f77e12b004114b41c5970d9cb9	527,996	0.1056%
17	0x8764a47ff3b42994aa08855622a2c1c0d2dbba04	250,991	0.0502%
18	0xce23e8383a90fdbb3a301b7fec8b70d67e47aaf7	100,000	0.0200%
19	0xfa1e73b0a382fe922b07139708dd57ae3eea8753	99,600	0.0199%
20	0xb1a044e8da18dcbe1705df7b6a09d4790f9c6d21	76,049	0.0152%

PIRROT GAME Token Distribution

PIRROT GAME Contract Overview



Contract functions details

+[Int] IERC20

- [Ext] totalSupply
- [Ext] balanceOf
- [Ext] transfer
- [Ext] allowance
- [Ext] approve
- [Ext] transferFrom

+Context

- [Int] _msgSender
- [Int] _msgData

+Ownable (Context)

- <constructor>
- [Pub] owner
- [Pub] renounceOwnership #
-modifiers: onlyOwner
- [Pub] transferOwnership #
-modifiers: onlyOwner
- [Pvt] _setOwner

+[Lib] SafeMath

- [Int] tryAdd
- [Int] trySub
- [Int] tryMul
- [Int] tryDiv
- [Int] tryMod
- [Int] add
- [Int] sub
- [Int] mul
- [Int] div
- [Int] mod
- [Int] sub
- [Int] div
- [Int] mod

+BaseToken

+StandardToken (IERC20, Ownable, BaseToken)

- <constructor> \$
- [Pub] name

Contract functions details

- [Pub] symbol
- [Pub] decimals
- [Pub] totalSupply
- [Pub] balanceOf
- [Pub] transfer #
- [Pub] allowance
- [Pub] approve #
- [Pub] transferFrom #
- [Pub] increaseAllowance #
- [Pub] decreaseAllowance #
- [Int] _transfer #
- [Int] _mint #
- [Int] _burn #
- [Int] _approve #
- [Int] _setupDecimals #
- [Int] _beforeTokenTransfer

(\$) = payable function

= non-constant function

Issues Checking Status

No.	Title	Status
1.	Unlocked Compiler Version	Passed
2.	Missing Input Validation	Passed
3.	Race conditions and Reentrancy. Cross-function race conditions.	Passed
4.	Possible delays in data delivery	Passed
5.	Oracle calls.	Passed
6.	Timestamp dependence.	Passed
7.	Integer Overflow and Underflow	Passed
8.	DoS with Revert.	Passed
9.	DoS with block gas limit.	Passed
10.	Methods execution permissions.	Passed
11.	Economy model of the contract.	Passed
12.	Private use data leaks.	Passed
13.	Malicious Event log.	Passed
14.	Scoping and Declarations.	Passed
15.	Uninitialized storage pointers.	Passed
16.	Arithmetic accuracy.	Passed
17.	Design Logic.	Passed
18.	Safe Open Zeppelin contracts implementation and usage.	Passed
19.	Incorrect Naming State Variable	Passed
20.	Too old version	Passed

Severity Definitions

Risk Level	Description
Critical	Critical vulnerabilities are usually straightforward to exploit and can lead to assets loss or data manipulations.
High	High-level vulnerabilities are difficult to exploit; however, they also have a significant impact on smart contract execution, e.g., public access to crucial functions
Medium	Medium-level vulnerabilities are important to fix; however, they can't lead to assets loss or data manipulations.
Low	Low-level vulnerabilities are mostly related to outdated, unused, etc. code snippets that can't have a significant impact on execution.

Security Issues

✔ Critical Severity Issues

No critical severity issue found.

✔ High Severity Issues

No high severity issue found.

✔ Medium Severity Issues

No medium severity issue found.

✔ Low Severity Issues

No low severity issue found.

Centralization

Owner privileges :

- PIRROT GAME Contract:
 - Owner can transfer/renounce ownership.

This smart contract has some functions which can be executed by the admin (Owner) only. If the admin wallet private key would be compromised, then it would create trouble, as smart contract ownership has not been renounced. Following are Admin functions:

- transferOwnership
- renounceOwnership

Conclusion

Smart contract contains no high or low severity issues! The further transfer and operations with the fund raised are not related to this particular contract.

HackSafe note: Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.