



CFG NINJA AUDITS

Security Assessment

CypherBOT Token

October 4, 2023

Audit Status: Pass

Audit Edition: Advance



Risk Analysis

Classifications of Manual Risk Results

Classification	Description
🔴 Critical	Danger or Potential Problems.
🟠 Major	Be Careful or Fail test.
🟢 Minor	Pass, Not-Detected or Safe Item.
🟡 Informational	Function Detected

Manual Code Review Risk Results

Contract Priviledge	Description
🟢 Buy Tax	1
🟢 Sale Tax	1
🟢 Cannot Buy	Pass
🟢 Cannot Sale	Pass
🟢 Max Tax	1
🟢 Modify Tax	Not-Detected
🟢 Fee Check	Pass
🟢 Is Honeypot?	Not detected
🟢 Trading Cooldown	Not Detected
🔴 Can Pause Trade?	Fail
🔴 Pause Transfer?	Detected, Owner needs to enable trade.



Contract Priviledge	Description
● Max Tx?	Pass
● Is Anti Whale?	Not Detected
● Is Anti Bot?	Not Detected
● Is Blacklist?	Not Detected
● Blacklist Check	Pass
● is Whitelist?	Detected
● Can Mint?	Pass
● Is Proxy?	Not Detected
● Can Take Ownership?	Not detected
● Hidden Owner?	Not detected
● Owner	0xCBf4f550B4237f1a66ef91b513bE84f6220Ec24a
● Self Destruct?	Not Detected
● Other?	Not detected
● Other?	Not detected
● Holders	3
● Auditor Confidence	High

The following quick summary it's added to the project overview; however, there are more details about the audit and its results. Please read every detail.



Project Overview

Token Summary

Parameter	Result
Address	0x042FB48e2Da82f9aaFbf5e4e84CF888140Ce7405
Name	CypherBOT
Token Tracker	CypherBOT (cBOT)
Decimals	18
Supply	1,000,000
Platform	Ethereum
compiler	v0.8.19+commit.7dd6d404
Contract Name	cBot
Optimization	Yes with 200 runs
LicenseType	MIT
Language	Solidity
Codebase	https://etherscan.io/address/0x042FB48e2Da82f9aaFbf5e4e84CF888140Ce7405#code
Payment Tx	0x5b20dd8bbd2553080e82fd798d4fe4fa3526ec11295468b33deb8aac6315581f





Main Contract Assessed

Contract Name

Name	Contract	Live
CypherBOT	0x042FB48e2Da82f9aaFbf5e4e84CF888140Ce7405	Yes

TestNet Contract Assessed

Contract Name

Name	Contract	Live
CypherBOT	0x251EDc5B0Dad50db2172EAaAA7aa3aFB4F16371a	Yes

Solidity Code Provided

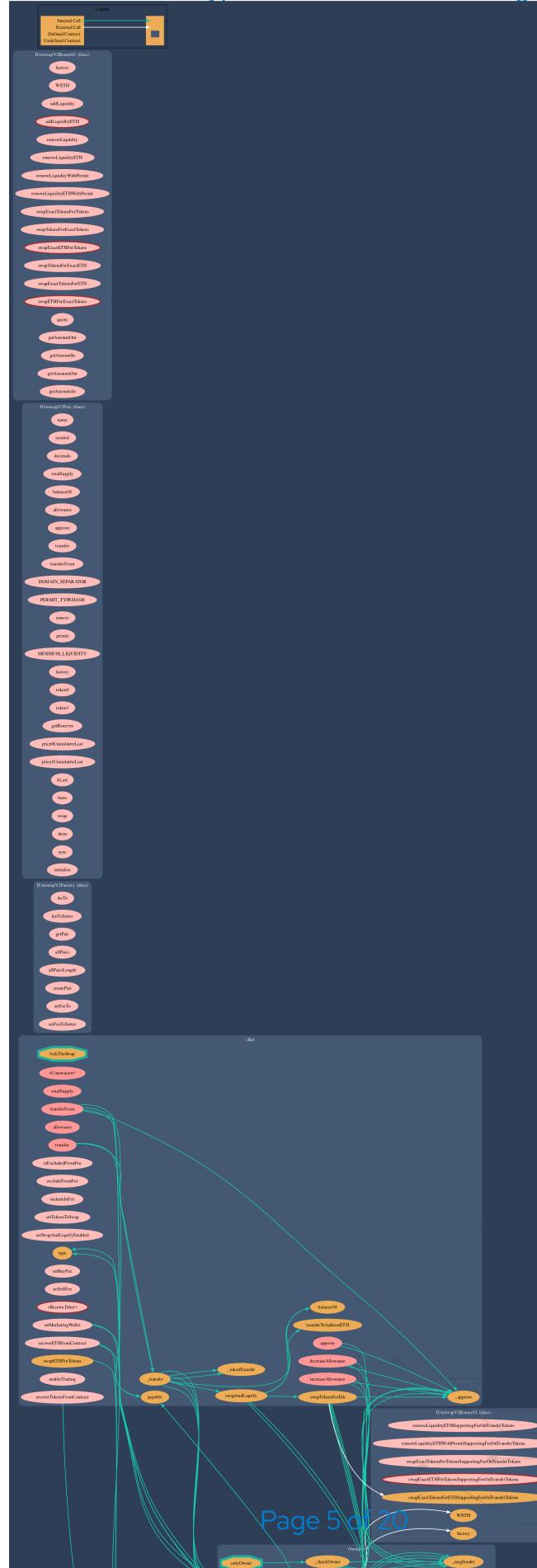
SolID	File Sha-1	FileName
cBot	d0d16f6dc5414dd0cd505ba08acb2e369b8ddf7e	cBot.sol
cBot		
cBot		
cBot		





Call Graph

The contract for CypherBOT has the following call graph structure:



Smart Contract Vulnerability Checks

The Smart Contract Weakness Classification Registry (SWC Registry) is an implementation of the weakness classification scheme proposed in EIP-1470. It is loosely aligned to the terminologies and structure used in the Common Weakness Enumeration (CWE) while overlaying a wide range of weakness variants that are specific to smart contracts.

ID	Severity	Name	File	location
SWC-100	Pass	Function Default Visibility	cBot.sol	L: 0 C: 0
SWC-101	Pass	Integer Overflow and Underflow.	cBot.sol	L: 0 C: 0
SWC-102	Pass	Outdated Compiler Version file.	cBot.sol	L: 0 C: 0
SWC-103	Pass	A floating pragma is set.	cBot.sol	L: 0 C: 0
SWC-104	Pass	Unchecked Call Return Value.	cBot.sol	L: 0 C: 0
SWC-105	Pass	Unprotected Ether Withdrawal.	cBot.sol	L: 0 C: 0
SWC-106	Pass	Unprotected SELFDESTRUCT Instruction	cBot.sol	L: 0 C: 0
SWC-107	Pass	Read of persistent state following external call.	cBot.sol	L: 0 C: 0
SWC-108	Pass	State variable visibility is not set..	cBot.sol	L: 0 C: 0
SWC-109	Pass	Uninitialized Storage Pointer.	cBot.sol	L: 0 C: 0
SWC-110	Pass	Assert Violation.	cBot.sol	L: 0 C: 0



ID	Severity	Name	File	location
SWC-111	Pass	Use of Deprecated Solidity Functions.	cBot.sol	L: 0 C: 0
SWC-112	Pass	Delegate Call to Untrusted Callee.	cBot.sol	L: 0 C: 0
SWC-113	Pass	Multiple calls are executed in the same transaction.	cBot.sol	L: 0 C: 0
SWC-114	Pass	Transaction Order Dependence.	cBot.sol	L: 0 C: 0
SWC-115	Pass	Authorization through tx.origin.	cBot.sol	L: 0 C: 0
SWC-116	Pass	A control flow decision is made based on The block.timestamp environment variable.	cBot.sol	L: 0 C: 0
SWC-117	Pass	Signature Malleability.	cBot.sol	L: 0 C: 0
SWC-118	Pass	Incorrect Constructor Name.	cBot.sol	L: 0 C: 0
SWC-119	Pass	Shadowing State Variables.	cBot.sol	L: 0 C: 0
SWC-120	Pass	Potential use of block.number as source of randomness.	cBot.sol	L: 0 C: 0
SWC-121	Pass	Missing Protection against Signature Replay Attacks.	cBot.sol	L: 0 C: 0
SWC-122	Pass	Lack of Proper Signature Verification.	cBot.sol	L: 0 C: 0
SWC-123	Pass	Requirement Violation.	cBot.sol	L: 0 C: 0
SWC-124	Pass	Write to Arbitrary Storage Location.	cBot.sol	L: 0 C: 0
SWC-125	Pass	Incorrect Inheritance Order.	cBot.sol	L: 0 C: 0



ID	Severity	Name	File	location
SWC-126	Pass	Insufficient Gas Griefing.	cBot.sol	L: 0 C: 0
SWC-127	Pass	Arbitrary Jump with Function Type Variable.	cBot.sol	L: 0 C: 0
SWC-128	Pass	DoS With Block Gas Limit.	cBot.sol	L: 0 C: 0
SWC-129	Pass	Typographical Error.	cBot.sol	L: 0 C: 0
SWC-130	Pass	Right-To-Left-Override control character (U+202E).	cBot.sol	L: 0 C: 0
SWC-131	Pass	Presence of unused variables.	cBot.sol	L: 0 C: 0
SWC-132	Pass	Unexpected Ether balance.	cBot.sol	L: 0 C: 0
SWC-133	Pass	Hash Collisions with Multiple Variable Length Arguments.	cBot.sol	L: 0 C: 0
SWC-134	Pass	Message call with hardcoded gas amount.	cBot.sol	L: 0 C: 0
SWC-135	Pass	Code With No Effects (Irrelevant/Dead Code).	cBot.sol	L: 0 C: 0
SWC-136	Pass	Unencrypted Private Data On-Chain.	cBot.sol	L: 0 C: 0

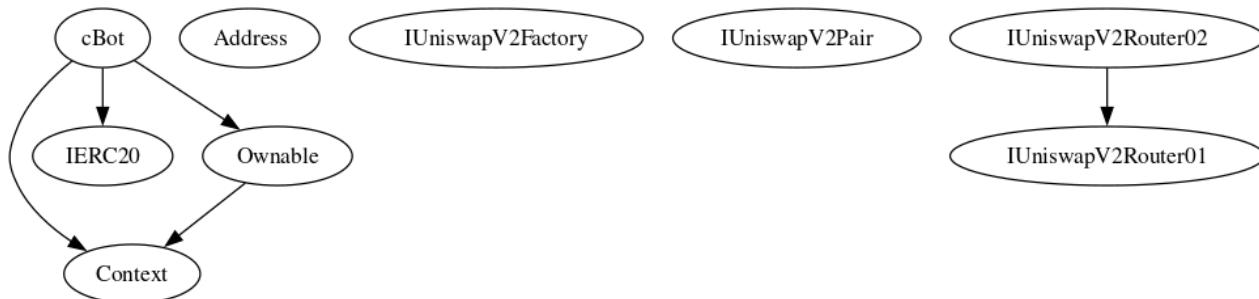
We scan the contract for additional security issues using MYTHX and industry-standard security scanning tools.





Inheritance

The contract for CypherBOT has the following inheritance structure.



Smart Contract Advance Checks

ID	Severity	Name	Result	Status
cBOT-01	Minor	Potential Sandwich Attacks.	Pass	Not-Found
cBOT-02	Minor	Function Visibility Optimization	Pass	Not-Detected
cBOT-03	Major	Lack of Input Validation.	Fail	Detected
cBOT-04	Major	Centralized Risk In addLiquidity.	Pass	Not-Detected
cBOT-05	Major	Missing Event Emission.	Fail	Detected
cBOT-06	Minor	Conformance with Solidity Naming Conventions.	Pass	Not-Detected
cBOT-07	Minor	State Variables could be Declared Constant.	Pass	Not-Found
cBOT-08	Minor	Dead Code Elimination.	Pass	Not-Found
cBOT-09	Major	Third Party Dependencies.	Pass	Not-Found
cBOT-10	Major	Initial Token Distribution.	Pass	Not-Found
cBOT-11	Minor	Airdrop is present in code.	Pass	Not-Detected
cBOT-12	Major	Centralization Risks In The X Role	Pass	Not-Found
cBOT-13	Informational	Extra Gas Cost For User..	Pass	Not-Found
cBOT-14	Minor	Unnecessary Use Of SafeMath	Pass	Not-Detected
cBOT-15	Medium	Symbol Length Limitation due to Solidity Naming Standards.	Pass	Not-Found



ID	Severity	Name	Result	Status
cBOT-16	Medium	Invalid collection of Taxes during Transfer.	Pass	Not-Detected
cBOT-17	Informational	Conformance to numeric notation best practice.	Pass	Not-Found
cBOT-18	Critical	Stop Transactions by using Enable Trade.	Fail	Detected, Owner needs to enable trade.



cBOT-03 | Lack of Input Validation.

Category	Severity	Location	Status
Volatile Code	● Major	cBot.sol: 125,14	■ Detected

Description

The given input is missing the check for the non-zero address.

The given input is missing the check for the unSetPair is missing required function.

Remediation

We advise the client to add the check for the passed-in values to prevent unexpected errors as below:

```
...
require(receiver != address(0), "Receiver is the zero address");
...
...
require(value X limitation, "Your not able to do this function");
...
```

We also recommend customer to review the following function that is missing a required validation. unSetPair is missing required function.



cBOT-05 | Missing Event Emission.

Category	Severity	Location	Status
Volatile Code	● Major	cBot.sol: 125, 14	🔗 Detected

Description

Detected missing events for critical arithmetic parameters. There are functions that have no event emitted, so it is difficult to track off-chain changes. The linked code does not create an event for the transfer.

Remediation

Emit an event for critical parameter changes. It is recommended emitting events for the sensitive functions that are controlled by centralization roles.



cBOT-18 | Stop Transactions by using Enable Trade.

Category	Severity	Location	Status
Logical Issue	Critical	cBot.sol: 469, 13	 Detected, Owner needs to enable trade.

Description

Enable Trade is present on the following contract and when combined with Exclude from fees it can be considered a whitelist process, this will allow anyone to trade before others and can represent and issue for the holders.

Remediation

We recommend the project owner to carefully review this function and avoid problems when performing both actions.

Project Action



Technical Findings Summary

Classification of Risk

Severity	Description
🔴 Critical	Risks are those that impact the safe functioning of a platform and must be addressed before launch. Users should not invest in any project with outstanding critical risks.
🟠 Major	Risks can include centralization issues and logical errors. Under specific circumstances, these major risks can lead to loss of funds and/or control of the project.
🟡 Medium	Risks may not pose a direct risk to users' funds, but they can affect the overall functioning of a platform
🟢 Minor	Risks can be any of the above but on a smaller scale. They generally do not compromise the overall integrity of the Project, but they may be less efficient than other solutions.
ℹ️ Informational	Errors are often recommended to improve the code's style or certain operations to fall within industry best practices. They usually do not affect the overall functioning of the code.

Findings

Severity	Found	Pending	Resolved
🔴 Critical	1	0	0
🟠 Major	0	0	0
🟡 Medium	0	0	0
🟢 Minor	2	0	0
ℹ️ Informational	0	0	0
Total	3	0	0



Social Media Checks

Social Media	URL	Result
Twitter	https://twitter.com/cypherbottech	Pass
Other		Fail
Website	https://cypherbot.tech	Pass
Telegram	https://t.me/cypherBOTofficial	Pass

We recommend to have 3 or more social media sources including a completed working websites.

Social Media Information Notes:

Auditor Notes: undefined

Project Owner Notes:



Assessment Results

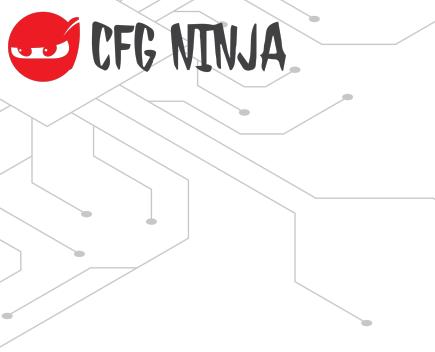
Score Results

Review	Score
Overall Score	97/100
Auditor Score	85/100
Review by Section	Score
Manual Scan Score	43/53
SWC Scan Score	37 /37
Advance Check Score	17 /19

The Following Score System Has been Added to this page to help understand the value of the audit, the maximum score is 100, however to attain that value the project must pass and provide all the data needed for the assessment. Our Passing Score has been changed to 80 Points, if a project does not attain 80% is an automatic failure. Read our notes and final assessment below.

Audit Passed





Assessment Results

Important Notes:

- Owner can't set max tx amount. ■
- Owner needs to enable trade. ■
- No high-risk Exploits/Vulnerabilities Were Found in the Source Code.

**Auditor Score =85
Audit Passed**



Appendix

Finding Categories

Centralization / Privilege

Centralization / Privilege findings refer to either feature logic or implementation of components that act against the nature of decentralization, such as explicit ownership or specialized access roles in combination with a mechanism to relocate funds.

Gas Optimization

Gas Optimization findings do not affect the functionality of the code but generate different, more optimal EVM opcodes resulting in a reduction on the total gas cost of a transaction.

Logical Issue

Logical Issue findings detail a fault in the logic of the linked code, such as an incorrect notion on how `block.timestamp` works.

Control Flow

Control Flow findings concern the access control imposed on functions, such as owner-only functions being invokeable by anyone under certain circumstances.

Volatile Code

Volatile Code findings refer to segments of code that behave unexpectedly on certain edge cases that may result in a vulnerability.

Coding Style

Coding Style findings usually do not affect the generated byte-code but rather comment on how to make the codebase more legible and, as a result, easily maintainable.

Inconsistency

Inconsistency findings refer to functions that should seemingly behave similarly yet contain different code, such as a constructor assignment imposing different require statements on the input variables than a setter function.

Coding Best Practices

ERC 20 Coding Standards are a set of rules that each developer should follow to ensure the code meets a set of criteria and is readable by all the developers.





Disclaimer

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