

Blockchain Security - Smart Contract Audits

Security Assessment

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Disclaimer

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ContractWolf provides transparent report to all its "clients" and to its "clients participants" and will not claim any guarantee of bug-free code within its **SMART CONTRACT**.

ContractWolf presence is to analyze, audit and assess the client's smart contract's code.

Each company or projects should be liable to its security flaws and functionalities.

Scope of Work

Web3Block team agreed and provided us with the files that needs to be tested (Github, Bscscan, Etherscan, files, etc.). The scope of the audit is the main contract.

The goal of this engagement was to identify if there is a possibility of security flaws in the implementation of the contract or system.

ContractWolf will be focusing on contract issues and functionalities along with the projects claims from smart contract to their website, whitepaper and repository which has been provided by **Web3Block**.

Network

Binance Smart Chain (BEP20)

Contract link

https://bscscan.com/address/0x7C876Dd95ac610893C2Ef9629e80534BA 069DBC6

Website

https://web3block.app

Telegram

https://t.me/web3block

Twitter

https://twitter.com/Web3Block

Description

Transfer anonymously across the most popular networks. **Web3Block** breaks the link between source and destination wallets to increase your privacy.



Risk Level Classification

Risk Level represents the classification or the probability that a certain function or threat that can exploit vulnerability and have an impact within the system or contract.

Risk Level is computed based on CVSS Version 3.0

Level	Value	Vulnerability
Critical	9 - 10	An Exposure that can affect the contract functions in several events that can risk and disrupt the contract
High	7 - 8.9	An Exposure that can affect the outcome when using the contract that can serve as an opening in manipulating the contract in an unwanted manner
Medium	4 - 6.9	An opening that could affect the outcome in executing the contract in a specific situation
Low	0.1 - 3.9	An opening but doesn't have an impact on the functionality of the contract
Informational	0	An opening that consists of information's but will not risk or affect the contract

Auditing Approach

Every line of code along with its functionalities will undergo manual review to check its security issues, quality, and contract scope of inheritance. The manual review will be done by our team that will document any issues that there were discovered.

Methodology

The auditing process follows a routine series of steps:

- 1. Code review that includes the following:
 - Review of the specifications, sources, and instructions provided to ContractWolf to make sure we understand the size, scope, and functionality of the smart contract.
 - Manual review of code, our team will have a process of reading the code line-by-line with the intention of identifying potential vulnerabilities and security flaws.
- 2. Testing and automated analysis that includes:
 - Testing the smart contract functions with common test cases and scenarios, to ensure that it returns the expected results.
- 3. Best practices review, the team will review the contract with the aim to improve efficiency, effectiveness, clarifications, maintainability, security, and control within the smart contract.
- 4. Recommendations to help the project take steps to secure the smart contract.

Used Code from other Frameworks/Smart Contracts (Direct Imports)

Imported Packages

- SafeMath
- IBEP20
- Auth
- IDEXFactory
- IDEXRouter
- IDividendDistributor
- DividendDistributor
- Web3Block

Description

Optimization enabled: Yes

Decimal: 9

Symbol: W3B

Max / Total supply: 1,000,000,000

Capabilities

Components

Version	Contracts	Libraries	Interfaces	Abstract
1.0	2	1	4	1

Exposed Functions

Version	Public	Private	Ex	ternal	Internal
1.0	17	2		61	20

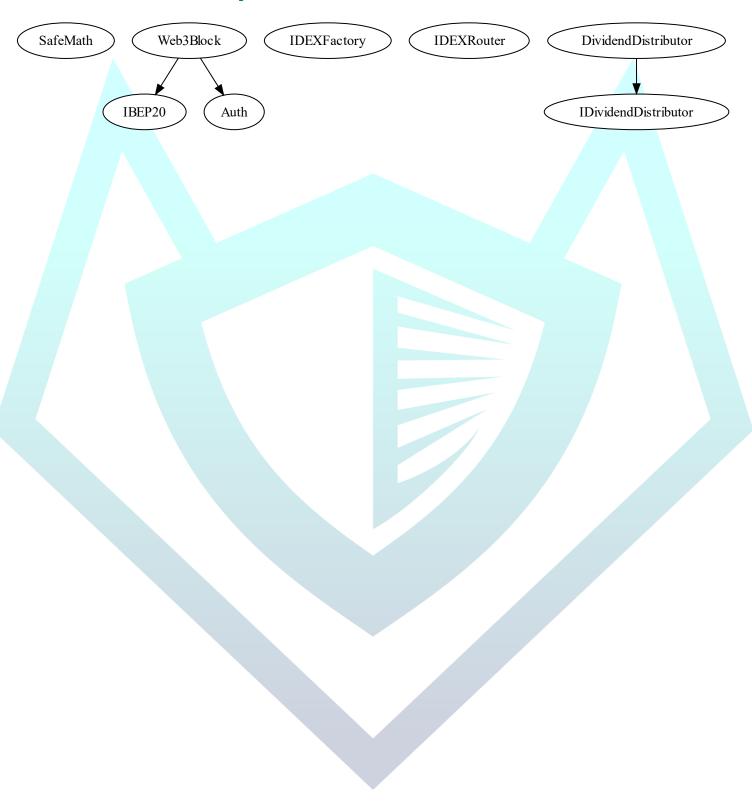
State Variables

Version	Total	Public
1.0	63	26

Capabilities

Version	Solidity	Experimental	Can	Uses	Has
	Versions	Features	Receive	Assembly	Destroyable
	Observed		Funds		Contracts
1.0	v0.7.6		Yes	No	No

Inheritance Graph



Correct implementation of Token Standard



Overall Checkup (Smart Contract Security)

Tested	Verified
√	√

Function	Description	Exist	Tested	Verified
TotalSupply	Information about the total coin or token supply	√	√	√
BalanceOf	Details on the account balance from a specified address	√	√	√
Transfer	An action that transfers a specified amount of coin or token to a specified address	√	√	√
TransferFrom	An action that transfers a specified amount of coin or token from a specified address	√	√	√
Approve	Provides permission to withdraw specified number of coin or token from a specified address	√	✓	√

Verify Claims

Statement	Exist	Tested	Deployer
Renounce Ownership	_	_	_
Mint	_	_	_
Burn	_	_	_
Block	√	√	√
Pause	√	√	√

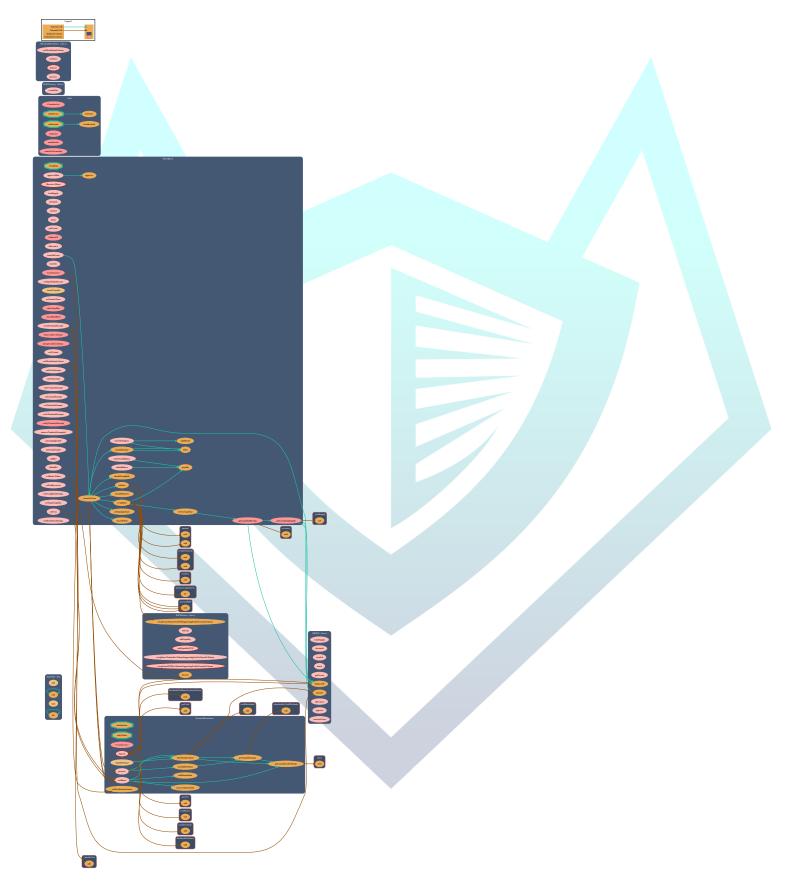
Legend

Attribute	Symbol
Verified / Can	✓
Verified / Cannot	X
Unverified / Not checked	
Not Available	_

Write Functions of Contract

1. addBot	18. setFees
2. antisnipingEnable	19. setIsDividendExempt
3. antiwhaleEnable	20. setIsFeeExempt
4. approve	21. setIsTimelockExempt
5. approveMax	22. setIsTxLimitExempt
6. authorize	23. setLaunchTime
7. buyCooldownStatus	24. setMaxWalletPercent
8. claimBalance	25. setSwapBackSettings
9. clearStuckBalance	26. setTargetLiquidity
10. deleteBot	27. setTimelockExempt
11. dumpCooldownStatus	28. setTxLimit
12. lockTheSnipers	29. setTxLimitExempt
13. removeTimelockExempted	30. transfer
14. setDistributionCriteria	31. transferFrom
15. setDistributorSettings	32. transferOwnership
16. setFeeExempt	33. unauthorize
17. setFeeReceivers	34. withdrawToken

Call Graph



SWC Attacks

ID	Title	Status
SWC-136	Unencrypted Private Data On-Chain	PASSED
<u>SWC-135</u>	Code With No Effects	PASSED
SWC-134	Message call with hardcoded gas amount	PASSED
<u>SWC-133</u>	Hash Collisions with Multiple Variable Length Arguments	PASSED
<u>SWC-132</u>	Unexpected Ether balance	PASSED
<u>SWC-131</u>	Presence of unused variables	PASSED
SWC-130	Right-To Left Override control character (U+202E)	PASSED
SWC-129	Typographical Error	PASSED
<u>SWC-128</u>	DoS With Block Gas Limit	PASSED
<u>SWC-127</u>	Arbitrary Jump with Function Type Variable	PASSED
SWC-126	Insufficient Gas Griefing	PASSED
SWC-125	Incorrect Inheritance Order	PASSED
<u>SWC-124</u>	Write to Arbitrary Storage Location	PASSED
<u>SWC-123</u>	Requirement Violation	PASSED
SWC-122	Lack of Proper Signature Verification	PASSED
<u>SWC-121</u>	Missing Protection against Signature Replay Attacks	PASSED
SWC-120	Weak Sources of Randomness from Chain Attributes	NOT PASSED
SWC-119	Shadowing State Variables	PASSED
SWC-118	Incorrect Constructor Name	PASSED
SWC-117	Signature Malleability	PASSED
SWC-116	Block values as a proxy for time	PASSED
SWC-115	Authorization through tx.origin	PASSED
SWC-114	Transaction Order Dependence	PASSED
SWC-113	DoS with Failed Call	PASSED
SWC-112	Delegate call to Untrusted Callee	PASSED
SWC-111	Use of Deprecated Solidity Functions	PASSED

SWC-110	Assert Violation	PASSED
SWC-109	Uninitialized Storage Pointer	PASSED
SWC-108	State Variable Default Visibility	NOT PASSED
SWC-107	Reentrancy	PASSED
SWC-106	Unprotected SELFDESTRUCT Instruction	PASSED
<u>SWC-105</u>	Unprotected Ether Withdrawal	PASSED
<u>SWC-104</u>	Unchecked Call Return Value	PASSED
SWC-103	Floating Pragma	NOT PASSED
SWC-102	Outdated Compiler Version	PASSED
SWC-101	Integer Overflow and Underflow	PASSED
<u>SWC-100</u>	Function Default Visibility	PASSED

AUDIT PASSED

Low Issues

A floating pragma is set (SWC-103)	L: 86 C: 25
State variable visibility is not set (SWC-108)	L: 223 C: 12, L: 231 C: 11, L: 232 C: 12, L: 233 C: 15, L: 235 C: 14, L: 236 C: 33, L: 237 C: 33, L: 251 C: 12, L: 253 C: 9, L: 390 C: 12, L: 391 C: 12, L: 392 C: 12, L: 393 C: 12, L: 394 C: 12, L: 400 C: 12, L: 406 C: 33, L: 407 C: 54, L: 409 C: 30, L: 410 C: 30, L: 411 C: 30, L: 412 C: 30, L: 414 C: 12, L: 415 C: 12, L: 422 C: 12, L: 423 C: 12, L: 438 C: 24,
Potential use of "block.number" as source of randomness (SWC-120)	L: 439 C: 12 L: 599 C: 39, L: 640 C: 66, L: 663 C: 45

Audit Comments

- Deployer can transfer ownership
- Deployer can block users
- Deployer can set authorized/unauthorized address
- Deployer can set max wallet token percentage
- Deployer can set launch time
- Deployer can set cooldown status
- Deployer can take BNB from contract to marketing fee receiver
- Deployer can take tokens from contract
- Deployer can toggle anti sniping status
- Deployer can toggle anti whale status
- Deployer can withdraw BNB from contract
- Deployer can include/exclude addresses from timelock
- Deployer can add/remove bots
- Deployer cannot burn
- Deployer cannot mint after initial deployment
- Authorized can include/exclude addresses from dividends
- Authorized can include/exclude addresses from fees
- Authorized can include/exclude addresses from max transaction limit
- Authorized can set max transaction limit with an indefinite amount
- Authorized can set fees with an amount not greater than 50%
- Authorized can set fee receivers
- Authorized can set swap back settings
- Authorized can set target liquidity
- Authorized can set distribution criteria
- Authorized can set distributor settings



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