TechRate
January, 2023

SMART CONTRACTS SECURITY AUDIT REPORT

Audit Details

Audited project

OpenWorld

Deployer address

0x5678917ffeb77827aafc33419e99dacd707313a9

Client contacts:

OpenWorld team

Blockchain

Binance Smart Chain

Project website:

https://openworld.vision

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 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.

Background

TechRate was commissioned by OpenWorld to perform an audit of smart contracts:

- https://bscscan.com/token/0x27a339d9b59b21390d7209b78a839868e319301b#code
- https://bscscan.com/address/0xd2345acb0e794f3bd53b18ec34d698e847619633#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 used to 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.

Contracts Details

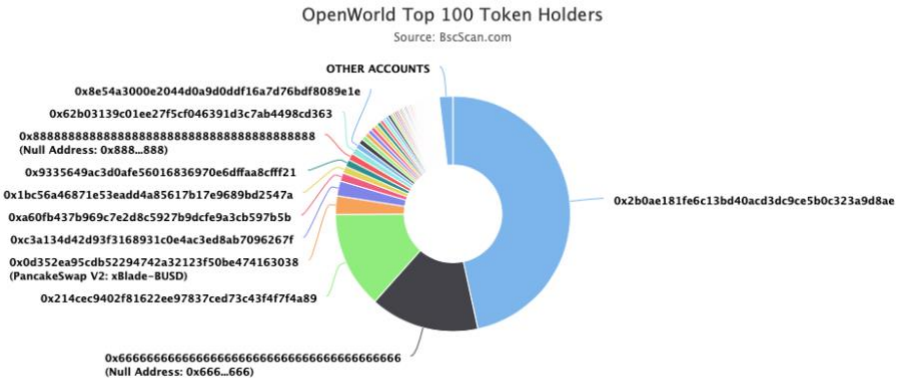
Token contract details (as Proxy) for 22.01.2023

Contract name	OpenWorld
Contract address	0x27a339d9B59b21390d7209b78a839868E319301B
Total supply	100,000,000
Token ticker	OPEN
Decimals	18
Token holders	55,117
Transactions count	112,416
Top 100 holders dominance	98.12%
Sell fee rate	2
Fee address	0x5678917ffeb77827aafc33419e99dacd707313a9
Contract deployer address	0x5678917ffeb77827aafc33419e99dacd707313a9
Owner address	0x2b0ae181fe6c13bd40acd3dc9ce5b0c323a9d8ae

OpenWorld Token Distribution

The top 100 holders collectively own 98.12% (98,115,656.36 Tokens) of OpenWorld

Token Total Supply: 100,000,000.00 Token | Total Token Holders: 55,117

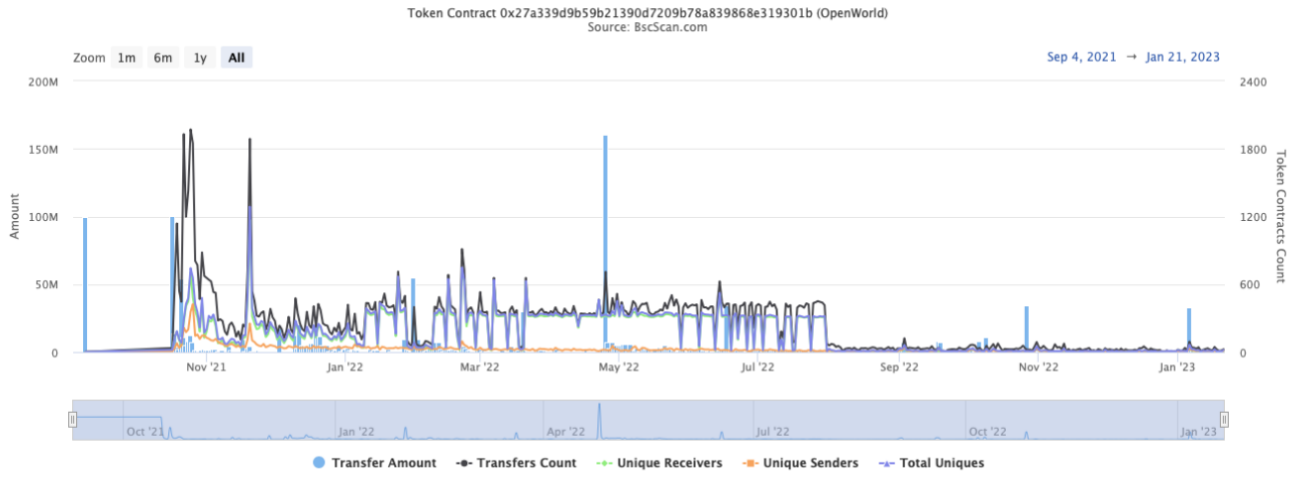


(A total of 98,115,656.36 tokens held by the top 100 accounts from the total supply of 100,000,000.00 token)

OpenWorld Contract Interaction Details

Time Series: Token Contract Overview

Thu 9, Sept 2021 - Sat 21, Jan 2023



OpenWorld Top 10 Token Holders

Rank	Address	Quantity	Percentage	Value
1	0x2b0ae181fe6c13bd40acd3dc9ce5b0c323a9d8ae	46,612,190.420043760348161048	46.6122%	$906,692.87
2	Null Address: 0x666...666	15,000,000	15.0000%	$291,777.60
3	0x214cec9402f81622ee97837ced73c43f4f7f4a89	13,299,763.609463472272163091	13.2998%	$258,704.87
4	PancakeSwap V2: xBlade-BUSD	2,549,107.40745951325328397	2.5491%	$49,584.83
5	0xc3a134d42d93f3168931c0e4ac3ed8ab7096267f	2,056,173.081786589060897563	2.0562%	$39,996.35
6	0xa60fb437b969c7e2d8c5927b9dcfe9a3cb597b5b	1,139,845.364809531035063154	1.1398%	$22,172.09
7	0x1bc56a46871e53eadd4a85617b17e9689bd2547a	986,986	0.9870%	$19,198.69
8	0x9335649ac3d0afe560168369 70e6dffaa8cfff21	977,437.493170276000142667	0.9774%	$19,012.96
9	Null Address: 0x888...888	948,761.057689205148786384	0.9488%	$18,455.15
10	0x62b03139c01ee27f5cf046391d3c7ab4498cd363	927,529.806851574893047024	0.9275%	$18,042.16

Contract functions details

+ OwnableUpgradeable (Initializable, ContextUpgradeable)
  - [Int] __Ownable_init #
    - modifiers: initializer
  - [Int] __Ownable_init_unchained #
    - modifiers: initializer
  - [Pub] owner
  - [Pub] renounceOwnership #
    - modifiers: onlyOwner
  - [Pub] transferOwnership #
    - modifiers: onlyOwner

+ [Lib] SafeMathUpgradeable
  - [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

+ Initializable
  - [Prv] _isConstructor

+ ERC20PausableUpgradeable (Initializable, ERC20Upgradeable, PausableUpgradeable)
  - [Int] __ERC20Pausable_init #
    - modifiers: initializer
  - [Int] __ERC20Pausable_init_unchained #
    - modifiers: initializer
  - [Int] _beforeTokenTransfer #

+ ERC20Upgradeable (Initializable, ContextUpgradeable, IERC20Upgradeable)
  - [Int] __ERC20_init #
    - modifiers: initializer
  - [Int] __ERC20_init_unchained #
    - modifiers: initializer

  - [Pub] name
  - [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 #

+ [Int] IERC20Upgradeable
  - [Ext] totalSupply
  - [Ext] balanceOf
  - [Ext] transfer #
  - [Ext] allowance
  - [Ext] approve #
  - [Ext] transferFrom #

+ [Lib] AddressUpgradeable
  - [Int] isContract
  - [Int] sendValue #
  - [Int] functionCall #
  - [Int] functionCall #
  - [Int] functionCallWithValue #
  - [Int] functionCallWithValue #
  - [Int] functionStaticCall
  - [Int] functionStaticCall
  - [Prv] _verifyCallResult

+ ContextUpgradeable (Initializable)
  - [Int] __Context_init #
    - modifiers: initializer
  - [Int] __Context_init_unchained #
    - modifiers: initializer
  - [Int] _msgSender
  - [Int] _msgData

+ PausableUpgradeable (Initializable, ContextUpgradeable)
  - [Int] __Pausable_init #
    - modifiers: initializer
  - [Int] __Pausable_init_unchained #
    - modifiers: initializer
  - [Pub] paused
  - [Int] _pause #
    - modifiers: whenNotPaused
  - [Int] _unpause #
    - modifiers: whenPaused

+ xBlade (ERC20PausableUpgradeable, OwnableUpgradeable)
  - [Pub] initialize #
    - modifiers: initializer
  - [Pub] transfer #
    - modifiers: whenNotPaused
  - [Pub] totalSupply
  - [Pub] transferFrom #
    - modifiers: whenNotPaused
  - [Pub] approve #
    - modifiers: whenNotPaused
  - [Pub] increaseAllowance #
    - modifiers: whenNotPaused
  - [Pub] decreaseAllowance #
    - modifiers: whenNotPaused
  - [Pub] burn #
  - [Pub] blackListAddress #
    - modifiers: onlyOwner,whenNotPaused
  - [Pub] blackListContractTransfer #
    - modifiers: onlyOwner,whenNotPaused
  - [Pub] isContract
  - [Pub] isContractTransferBlock
  - [Pub] addSellAddress #
    - modifiers: onlyOwner
  - [Pub] removeSellAddress #
    - modifiers: onlyOwner
  - [Pub] setSellFeeRate #
    - modifiers: onlyOwner
  - [Pub] setExceptionAddress #
    - modifiers: onlyOwner
  - [Pub] removeExceptionAddress #
    - modifiers: onlyOwner
  - [Pub] isSellAddress
  - [Pub] isExceptionAddress
  - [Pub] setStakerAddress #

    - modifiers: onlyOwner
  - [Prv] getValuesWithSellRate
  - [Pub] withdrawErc20 #
    - modifiers: onlyOwner
  - [Pub] burnTokenByAdmin #
    - modifiers: onlyOwner
  - [Pub] name
  - [Pub] symbol

($) = payable function
= non-constant function

+ Proxy
  - [Int] _delegate #
  - [Int] _implementation
  - [Int] _fallback #
  - [Ext] <Fallback> ($)
  - [Ext] <Fallback> ($)
  - [Int] _beforeFallback #

+ [Int] IBeacon
  - [Ext] implementation

+ [Lib] Address
  - [Int] isContract
  - [Int] sendValue #
  - [Int] functionCall #
  - [Int] functionCall #
  - [Int] functionCallWithValue #
  - [Int] functionCallWithValue #
  - [Int] functionStaticCall
  - [Int] functionStaticCall
  - [Int] functionDelegateCall #
  - [Int] functionDelegateCall #
  - [Prv] _verifyCallResult

+ [Lib] StorageSlot
  - [Int] getAddressSlot
  - [Int] getBooleanSlot
  - [Int] getBytes32Slot
  - [Int] getUint256Slot

+ ERC1967Upgrade

  - [Int] _getImplementation
  - [Prv] _setImplementation #
  - [Int] _upgradeTo #
  - [Int] _upgradeToAndCall #
  - [Int] _upgradeToAndCallSecure #
  - [Int] _upgradeBeaconToAndCall #
  - [Int] _getAdmin
  - [Prv] _setAdmin #
  - [Int] _changeAdmin #
  - [Int] _getBeacon
  - [Prv] _setBeacon #

+ ERC1967Proxy (Proxy, ERC1967Upgrade)
  - [Pub] <Constructor> ($)
  - [Int] _implementation

+ TransparentUpgradeableProxy (ERC1967Proxy)
  - [Pub] <Constructor> ($)
    - modifiers: ERC1967Proxy
  - [Ext] admin #
    - modifiers: ifAdmin
  - [Ext] implementation #
    - modifiers: ifAdmin
  - [Ext] changeAdmin #
    - modifiers: ifAdmin
  - [Ext] upgradeTo #
    - modifiers: ifAdmin
  - [Ext] upgradeToAndCall ($)
    - modifiers: ifAdmin
  - [Int] _admin
  - [Int] _beforeFallback #

($) = payable function
= non-constant function

Issues Checking Status

	Issue description	Checking status
1.	**Compiler errors.**	Passed
2.	**Race conditions and Reentrancy. Cross-function race conditions.**	Passed
3.	**Possible delays in data delivery.**	Passed
4.	**Oracle calls.**	Passed
5.	**Front running.**	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.	**The impact of the exchange rate on the logic.**	Passed
13.	**Private user data leaks.**	Passed
14.	**Malicious Event log.**	Passed
15.	**Scoping and Declarations.**	Passed
16.	**Uninitialized storage pointers.**	Passed
17.	**Arithmetic accuracy.**	Passed
18.	**Design Logic.**	Passed
19.	**Cross-function race conditions.**	Passed
20.	**Safe Open Zeppelin contracts implementation and usage.**	Passed
21.	**Fallback function security.**	Passed

Security Issues

High Severity Issues

No high severity issues found.

Medium Severity Issues

No medium severity issues found.

Low Severity Issues

No low severity issues found.

Notes:

- Contracts contain commented code and unused variables.
- Owner can burn user's tokens.

Owner privileges (In the period when the owner is not renounced)

- Owner can blacklist addresses.
- Owner can blacklist contract transfers.
- Owner can add/remove sell addresses.
- Owner can change sell fee rate.
- Owner can add/remove exception addresses.
- Owner can change stakerAddress.
- Owner can withdraw ERC20PausableUpgradeable tokens.

Testnet deployment

Contracts Description Table

Contract	Type	Bases		
└	**Function Name**	**Visibility**	**Mutability**	**Modifiers**
xBlade	Implementation	ERC20PausableUpgradeable, OwnableUpgradeable		
└	initialize	Public ❗	🛑	initializer
└	transfer	Public ❗	🛑	whenNotPaused
└	transferFrom	Public ❗	🛑	whenNotPaused
└	approve	Public ❗	🛑	whenNotPaused
└	burn	Public ❗	🛑	NO❗
└	blackListAddress	Public ❗	🛑	onlyOwner whenNotPaused
└	blackListContractTransfer	Public ❗	🛑	onlyOwner whenNotPaused
└	addSellAddress	Public ❗	🛑	onlyOwner
└	setSellFeeRate	Public ❗	🛑	onlyOwner
└	setExceptionAddress	Public ❗	🛑	onlyOwner
└	setStakerAddress	Public ❗	🛑	onlyOwner
└	withdrawErc20	Public ❗	🛑	onlyOwner
└	burnTokenByAdmin	Public ❗	🛑	onlyOwner

Legend

Symbol	Meaning
🛑	Function can modify state
💵	Function is payable

Conclusion

Smart contracts do not contain high severity issues! Liquidity pair contract's security is not checked due to out of scope. The further transfers and operations with the funds raise are not related to this particular contract.

Owner is set to 0x2B0Ae181FE6C13Bd40Acd3dC9ce5B0C323a9d8Ae address (Not audited):
https://bscscan.com/address/0x2b0ae181fe6c13bd40acd3dc9ce5b0c323a9d8ae

Liquidity locking details are NOT provided by the team.

Security score: 78.

TechRate 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.